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ESTABLISHED IN 1861

THE AMERICAN BEE JOURNAL

OLDEST BEE-PAPER IN AMERICA

Vol. XXVIII. CHICAGO, ILL., JULY 2, 1891. No. 1.

OLDEST BEE-PAPER IN AMERICA THE AMERICAN ESTABLISHED IN 1861

BEE JOURNAL

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THOMAS G. NEWMAN & SON

At One Dollar a Year.

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Always State the Post-Office to which your paper is addressed, when writing to us.

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A B C of Carp-Culture, by A. I. Root and Geo. Finley.—It is of great value to all who are interested in carp-culture. 70 pages. Price, 40 cents.

Foul-Brood, by A. R. Kohnke.—Origin, development and cure, as taught by the most noted apiarists in Germany. Price, 25 cents.

Practical Hints to Bee-Keepers, by C. F. Muth, on bees and foul brood. Price, 10c.

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Bee-Keeping.—Translation of Dzierzon's latest German book. Price, $2.00; paper, $1.50.

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Grain Tables; for casting up the price of grain, produce, hay, etc. Price, 40 cents.

A B C of Potato Culture, by T. B. Terry. Price, 40 cents.

Scientific Queen-Rearing, by G. M. Doolittle.—It details his experiments in the rearing of Queen-Bees. Price, $1.00.

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Silo and Silage, by Prof. A. J. Cook.— It gives the method in successful operation at the Michigan Agricultural College. Price, 25 cents.

Cheshire's treatment of Foul Brood.—Its cause and Prevention. Price, 10 cents.

Honey as Food and Medicine, by Thomas G. Newman.—In French. Price, 5 cents.

Langstroth on the Honey-Bee, revised by Charles Dadant.—It is entirely re-written and fully illustrated. Price, $2.00.

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Blessed Bees, by John Allen.—Full of practical information. Price, 75 cents.

Success in Bee-Culture, by James Heddon. Price, 50 cents.

Quinby's New Bee-Keeping, by L. C. Root.—This is a new edition of Mr. M. Quinby's "Mysteries of Bee-Keeping," entirely re-written by his son-in-law. Price, $1.50.

A B C of Strawberry Culture, by Messrs. T. B Terry and A. I. Root.—It is for those beginning to grow strawberries. Price, 40 cents.

Historic.—A brief history of the North American Bee-Keepers' Association, and Reports of the first 20 Conventions. Price, 25 cents.

By-Laws.—For local Associations, with name of the Organization printed. $2.00 per 100.

Ribbon Badges for Bee-Keepers, upon which is printed a large bee in gold. Price, 10 cents each. Large ones with rosette, 50 cents.

How I Produce Comb Honey, by George E. Hilton; 3d edition. Price, 5 cents.

Maple Sugar and the Sugar Bush, by Prof. A. J. Cook. Price, 40 cents.

A B C of Bee Culture, by A. I. Root.— A cyclopædia of everything pertaining to the care of the honey-bee. Price, $1.25.

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A Year Among the Bees, by Dr. C. C. Miller.—Chat about a season's work. Price, 50 cts.

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CHICAGO, ILL.

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THOMAS G. NEWMAN,
EDITOR.

Vol. XXVIII. July 2, 1891. No. 1.

Editorial Buzzings.

How doth the busy little bee
  Improve each shining hour?
It gets a hustle on itself,
  And works the early flower.

◆

Spraying Fruit Trees.—We have a new pamphlet on this subject by P. C. Lewis, of Catskill, N. Y. It will be sent free upon application to him.

◆

☞ The Fifth Annual Corn Palace Festival will be held in Sioux City, Iowa, Oct. 1 to 17, 1891, inclusive. With the world-wide reputation for beauty, novelty and expression of the resources of the West, which the Corn Palace has acquired, the knowledge and ambition of its builders have increased, and it is no idle promise to say that the Fifth Annual Corn Palace will be the grandest and handsomest structure yet conceived.

Mr. John P. Reynolds will this week, no doubt, be chosen Chief Executive of the Board of Illinois World's Fair Managers, which has the collection of an exhibit in charge. The position is a very important one, and no one else is considered for it. Mr. Reynolds has been for years the Manager of the State exhibits held in the Exposition building, and will be a competent chief. One of the Chicago daily papers gives him this "send off:"

> Mr. Reynolds is known to every turnip raiser in Winnebago county, to every ruddy orchard pruner of Crawford county, and to every bee-keeper of Brown county. He is also known to those dwellers of Stark and Pike counties, who have lugged their prize pumpkins every year up to the big Chicago fair. As grain inspector he is known to all the wheat growers of Macoupin and La Salle, and to the corn huskers of Boone. In fact, Mr. Reynolds is a patriarch exhibitor. He it was, who, with Potter Palmer, years ago, first conceived and executed the idea of an inter-state exhibit.

That Board will have the disposition of the $800,000 appropriation, and those who are acquainted with Mr. Reynolds will do well to write their congratulations, and remind him of the $5,000 required for the apiarian exhibit of Illinois, referred to on page 16 of this issue, by Mr. Hambaugh. We hope that he will help us to secure sufficient funds to insure a grand exhibit.

◆

The Crops in Illinois are reported to be in a more promising condition than they were a year ago. But the great question now for bee-keepers is, "What will the honey harvest amount to?" In some places white clover had no "sward" from last year, and consequently there was no honey from that source this year. In other places the yield is reported to be very satisfactory. The basswood honey crop is yet an unknown quantity. But we hope that there will be a good flow from it in a few days. Have your tubs "right side up" to catch it, if the shower comes.

No Duty on Queens.

The National Bee-Keepers' Union has again triumphed! Queen-bees may now be imported either by mail or express, free of duty!

The General Manager and Vice-President Cook promptly took the matter in hand, and made it lively at the Treasury Department at Washington.

Prof. Cook's personal friend, Edwin Willits, Esq., who has so often aided bee-keepers to obtain concessions at Governmental headquarters, again vigorously championed our cause (as will be seen by the correspondence published on page 632).

As a result, the following letter was duly received by the Manager of the Union, as briefly mentioned last week on page 824:

Treasury Department,
Washington, D. C., June 15, 1891.

To Thomas G. Newman,
Manager Bee-Keepers' Union,
Chicago, Ills.

Sir:—You are hereby referred to the Collector of Customs at New York, for the Department's decision of the 12th inst., on the case mentioned in your letter dated 11th ult., relative to entry of queen-bees. A copy of the decision is herewith enclosed.

Respectfully yours,
Andrew Johnson,
Acting Chief of Division of Customs.

The decision of the Treasury Department on this subject reads as follows:

Collector of Customs, New York.

Sir:—The Department is in receipt of a letter from Mr. A. J. Cook, Professor in the Zoological Department of the Michigan Agricultural College, dated the 15th ult., in which he encloses a copy of a letter addressed by you to Mr. W. C. Frazier, Atlantic, Iowa, in relation to the admission to free entry of queen-bees, under the provision of paragraph 482 of the act of October 1, 1891, which exempts from payment of duty "any animal imported specially for breeding purposes," but prescribes that "no such animal shall be admitted free unless pure bred of a recognized breed, and duly registered in the book of record established for that breed," and that "certificate of such record and of the pedigree of such animal shall be produced and submitted to the customs officer, duly authenticated by the proper custodian of such book of record, together with the affidavit of the owner, agent or importer that such animal is the identical animal described in said certificate of record and pedigree."

It has been represented to the Department, and it is doubtless true, that queen-bees, which are classified for duty as animals, are never imported for any purpose other than breeding; that they are always of superior breed and adapted to improve the stock in this country, but that from the nature of the case the keeping of books of record of the recognized breeds, and the furnishing of certificates of registry as required by said provision of law is impracticable.

Queen-bees were admitted to free entry under the provisions for animals specially imported for breeding purposes contained in Title 33 of the Revised Statutes, and the act of March 3, 1883, and the regulations applicable to other animals were modified as to bees, so as to dispense with certain requirements on their importation as to inspection.

In other cases where the production of statutory evidence was impracticable, and the importation came clearly within the spirit of the law, such evidence has been waived, as in the case of works of American artists, imported after their decease, on the ground that the law does not require impossibilities.

The Department is therefore of opinion that it was not the intention of Congress to change the practice in the matter of the free entry of queen-bees imported for breeding purposes, and that *queen-bees of recognized breeds may properly be admitted to free entry* under the provisions of paragraph 482, without requiring the certificate of record and pedigree specified therein.

You will, therefore, be governed accordingly. Respectfully yours,
O. L. Spaulding,
Assistant Secretary.

After receiving the above, the following came from Prof. Cook, who has interested himself in the matter very heartily:

Dear Mr. Newman:—I am very happy to inform you that the Assistant Secretary of the Treasury, O. L. Spaulding, informs me that queens are exempted from duty.

I consulted an official high in Government service, who was a fine lawyer. He said that he saw no hope for us under the new act. I then wrote very elaborately to Secretary Foster. I showed him that the spirit of the law did not require a strict construction, that under the old law bees received special consideration; that the new law could not be kept, so as to do justice to bee-keepers, and that equity required that a liberal construction should be put to the new act; otherwise the spirit of the law would be disregarded, many people injured, and injustice done to a most worthy class of our people.

I am very glad we have won this battle so early. I expected we would win in the end. I did not expect so early a victory. "Ever the right comes uppermost, and ever is justice done."

A. J. Cook.

Agricultural College, Mich., June 18.

Honey-Dew.—Mr. S. Burton, of Eureka, Ills., reports that his bees have gathered nearly a thousand pounds of the so-called honey-dew from the walnut trees. It is as black as tar, and he does not know what to do with it. The bees gather large quantities of it every morning.

Some Leaves are sent us by Mr. Henry W. Schmadaka, of Germanville, Iowa. They are thickly covered with the so-called honey-dew. We never saw such a heavy covering of it before.

Fire destroyed the dwelling of Mr. Geo. H. Kirkpatrick, of Union City, Ind., on June 16, 1891. It was insured, as such property should be.

W. H. Norton sends us more of his *very thin* comb-foundation. This is thinner than ever. It takes 36 sheets to weigh a pound.

C. W. Banker died at Morgantown, N. C., leaving his widowed mother, Mrs. G. Lamb, without other means of support than the revenue from his bees. She desires employment in a family. Any one in that locality will do her a favor to correspond with her on that matter.

Hon. J. M. Hambaugh is entitled to the hearty thanks of the bee-keepers of Illinois for the efficient work he has done in the Legislature, as shown by his report on page 15 of this issue. We have assisted him in every way within our power, by writing personal letters to Senators and Representatives, asking their influence and votes in favor of our pursuit, etc. We are satisfied with what has been accomplished, and in behalf of the bee-keepers of the State, we tender our hearty thanks to Mr. Hambaugh for his energetic work—not forgetting those who assisted in carrying the measures through to a final vote.

The Squire and the Bees.—A comical scene in a court room was reported in the Dubuque *Telegraph* on June 15, 1891. Two neighbors had quarreled, and one of them entered a suit before Justice Carson to recover damages for the bite of a dog, which, during the quarrel, attempted to defend his master. The *Telegraph* adds:

> In addition to being Justice of the Peace, 'Squire Carson runs a bee-yard, and during the progress of the trial he was frequently compelled to interrupt the attorneys, sometimes in the midst of their flights of eloquence, saying, "Excuse me, but the bees are swarming, and I'll have to go out and take care of them." The 'Squire, no doubt, hopes it will be many years before he will have to settle a dispute between neighbors again.

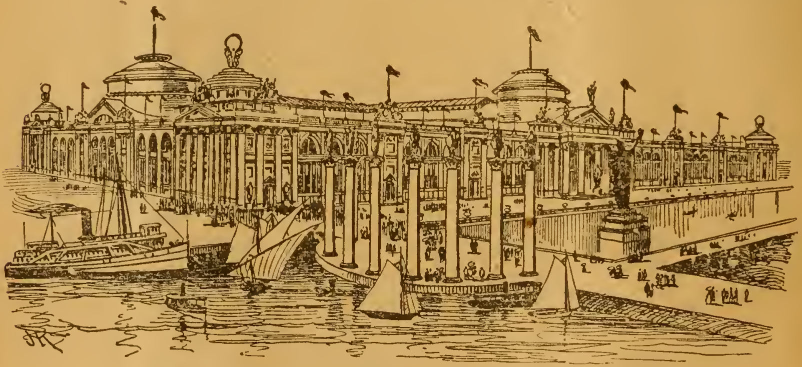
Feeders have been received from Abner Brown, of Michigan. They are to be screwed to the back of the hive, after boring a hole in it. We much prefer several others already on the market, which require no such work.

☞ The California *Bee-Keeper* has been removed from San Francisco to San Mateo. No May number was issued on account of moving. The June issue has just arrived.

Bees and Honey at the Fair.

We have had a visit from W. I. Buchanan, Esq., Chief of the United States Department of Agriculture, and it is now definitely determined that the Bee and Honey Exhibits will be in the Agricultural Building, and will, consequently, be under the immediate control of Mr. Buchanan. Bee-keepers are to be congratulated upon this fact, for that gentleman is interested in apiculture, and will bend his energies to further the interests of our pursuit.

We herewith present an engraving of the Agricultural Building, with a full description of it, and all its appointments.



AGRICULTURAL BUILDING. [From Harper's Weekly.]

The Bee and Honey Department is to be located at the extreme left of the building, as shown in the illustration. The elevated railroad will pass the main entrance on the opposite side of the building to the one shown on the right in the engraving. Upon alighting at the station and entering the doorway, turn immediately to the right, and proceed to the extreme end of the building, and there the Bee and Honey Exhibit will be found.

The buildings and grounds will be lighted by thousands of electric lamps, and the whole will be enchanting in its magnificence and grandeur.

Bee-keepers should give the world an adequate idea of the pursuit, by making the grandest exhibit ever witnessed in any country on the face of the globe—one that shall be in harmony with the surrounding magnificence and splendor.

The following description of some of the plans settled upon will give a faint idea of what the World's Fair is to be:

AGRICULTURAL BUILDINGS.

One of the most desirable and interesting features of the Exposition will be the proposed Live Stock and Agricultural Assembly Hall, the erection of which is now assured. This building will probably connect Machinery Hall with the Agricultural Building, fronting on the main court of the Exposition grounds, and will be conveniently near one of the stations of the elevated railroad. It will be a very handsome building, and will undoubtedly be the common meeting point for all persons interested in live stock and agricultural pursuits.

On the first floor, near the main entrance of the building, will be located a bureau of information, in charge of attendants, who will furnish visitors with all necessary information in regard to the Assembly Hall and the Main Agricultural Building, as well as other features of the Exposition. The first floor will also contain suitable committee and other rooms for the different live stock associations of every character, where such associations can meet and have their secretaries in constant attendance, thus affording this important industry ample headquarters near the live stock exhibit and the Agricultural Buildings.

On this floor there will also be large and handsomely equipped waiting rooms, with fireplaces for ladies, lounging rooms for gentlemen and ample toilet facilities. Broad stairways will lead from the first floor into the Assembly room, which will have a seating capacity of about fifteen hundred. This Assembly room will furnish facilities for lectures, which will be delivered by gentlemen eminent in their special fields of work, embracing every interest connected with live stock, agriculture and its allied industries.

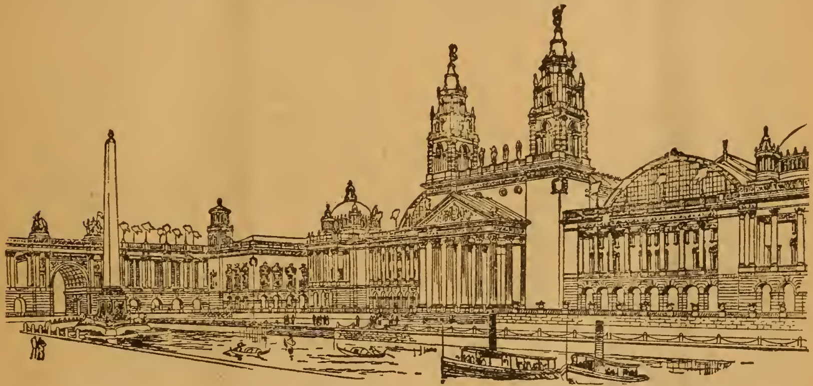
When one considers that in this room almost daily there will be lectures delivered, papers read and discussions had, conducted by eminent specialists from all parts of the world, the importance of such a building for educational purposes is apparent. Taken in connection with the exhibits, this feature will make that part of the Exposition devoted to live stock, agriculture and horticulture a complete gathering together of all that an advanced civilization is capable of producing. In the Assembly Room the most approved theories will be advanced and explained. On the grounds and in the Agricultural and Horticultural buildings will be the best illustrations of what can be accomplished when these theories are put into practice.

Men who have made the dairy business, for instance, a life study will read papers and deliver lectures on matters connected with the dairy; and close at hand, in full operation, it is hoped to have a working dairy, affording a practical object lesson of the improved methods which have been applied to this industry. And so through all the branches of agriculture and horticulture, the Exposition as an educational means will be both theoretical and practical.

The entire second floor of the Assembly Building is given up to committee rooms, and rooms for headquarters for each and all of the different farmers' organizations in existence in this country. It will furnish a definite and pleasant home for all such organizations during the entire time of the Exposition, where each may have its secretary or other official constantly in attendance to furnish information and transact other business, and where the members can hold such consultations as they may desire.

MACHINERY HALL.

The main Machinery Building will measure 850 feet by 500. It is spanned by three arched trusses, and the interior will present the appearance of three railroad train houses side by side, surrounded on all the four sides by a fifty foot gallery. The trusses are all to be built separately, and so that they can be taken down and sold for use as railroad train houses, and it is hoped to have iron trusses instead of cheaper ones, which may, however, be necessary.



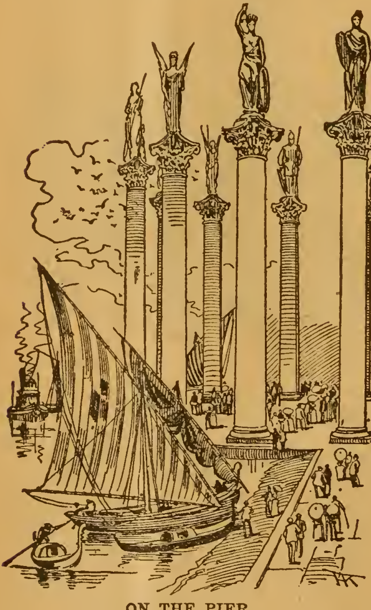
PALACE OF MECHANIC ARTS.

In each of these three long naves there is to be an elevated traveling crane running from end to end of the building. These will be useful in moving machinery, and when the Exposition opens platforms will be placed on them, and visitors will view from these the entire exhibition at a great saving of tramping.

Shafting for power will be carried on the same posts which support these traveling bridges. The exterior toward the stock exhibit and the railroad is to be of the plainest description. On the two sides adjoining the grand court the exterior will, however, be rich and palatial. All the buildings on this grand plaza are designed with a view to making an effective background for displays of every kind, and in order to conform to the general richness of the court and add to the festal appearance the two facades on the court are enriched with colonnades and other architectural features.

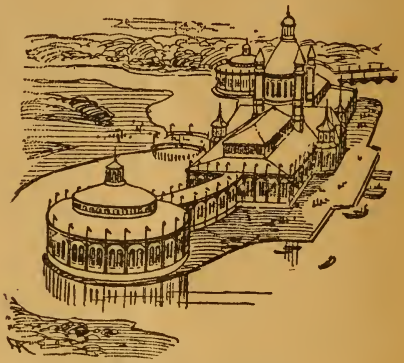
The design follows classical models throughout, the detail being borrowed from the Renaissance of Seville and other Spanish towns as being appropriate to a Columbian celebration. As in all the other buildings on the court, an arcade on the first story permits passage around the building under cover; and as in all the other buildings, the fronts will be formed of "staff," colored to an ivory tone. The ceilings of the porticoes will be emphasized with strong color.

A colonnade with a cafe at either end forms the connecting link between Machinery and Agricultural halls, and in the center of this colonnade is an archway leading to the cattle exhibits. From this portico there will be a view nearly a mile in length down the lagoon, and an obelisk and fountain placed in the lagoon between the two buildings, Agriculture and Machinery, will form a fitting southern point to this vista.



ON THE PIER.

The Machinery annex will be placed in the rear of the Administration Building, and in the loop formed by the railroad tracks. It will be entered by tunnels or subways, as well as by bridges from Machinery Hall and the buildings for Administration, Mines and Transportation. It is to be a very large, but very simple building. While in the Main Machinery Building a railroad train house is the type, in the annex a mill or foundry will be considered the model for construction. It is all to be built of wood in the most simple and economical manner. Its shape, however, is peculiar. It is to be annular in form, the diameter of the outer radius being 800 feet and of the inner radius 600 feet.



FISHERIES BUILDING.

The building will have a nave 100 feet wide, with a 50 foot wide lean-to in one story on the inside, and a 50 foot wide lean-to on the outside. Within the inner circle will be a park in which visitors, fatigued by the hum of machinery, may rest. The annular form chiefly commends itself, because a circuit electric elevated railway can run continuously around the entire main nave, and passengers in it can thus see the entire exhibit without leaving the cars, and machinery can be easily moved by this means. The power will be transmitted by shafting crossing the building at each bay, with a motor at each shaft. The electrical power will be used in the annex, and steam power in the Main Machinery Building.

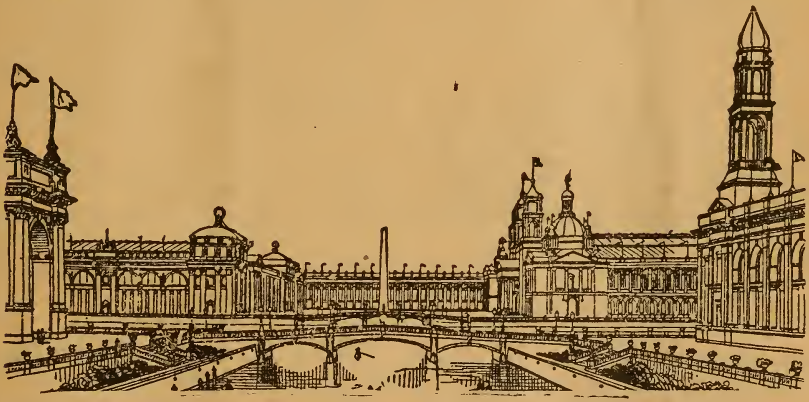
Attached to this great annex will be the power house, convenient to the tracks for coal supply, etc., containing an immense display of boilers, while in the adjoining portion of the Annex Building will be established the enormous plant of engines and dynamos. This will probably be the largest and most interesting display of electrical power ever made. It is possible that gas will be used instead of coal for fuel beneath the boilers, and in that case a a building will be prepared for making it.

PERSPECTIVE OF SOUTH LAGOON.

The view is taken looking south through the lagoon, which lies between the building for manufacturers and that for the display of electricity. This lagoon crosses the great basin, and terminates beyond the second bridge at the obelisk and fountain.

On the extreme right of the picture a portion of the east front and one of the towers of the Electrical Building are visible. Beyond and opposite the Building across the basis is seen part of the palace of Machinery, its eastern facade crowned with domes and towers.

On the extreme left is seen a corner of the west front of the Manufacturers' Building, and opposite this and across the basin the building for the agricultural exhibit. This building is connected with the palace of Machinery by the long colonnade in the center background, forming a great portico entrance to the live stock grounds farther south, and at the same time completing the monumental group on the south of the great basis. A triple arch bridge spans the lagoon in the foreground, affording communication between the Electrical and Manufacturers' buildings. It is only one of many such bridges which will be built in other parts of the grounds.



PERSPECTIVE VIEW OF SOUTH LAGOON.

Notice to the right or the left the manner of terracing. From the water rises a sea wall whose coping guards access to the first terrace. In this wall gates and jetties will be arranged so that landings can be effected from the small boats of the park. This first terrace is the domain of the landscape gardener, and will be devoted to flowers, shrubbery and gravel walks. Some four feet above this terrace is the great paved platform serving as a base to the buildings. This platform is finished with balustrades, vases and statuary, and approach to it from the first terrace is gained at intervals by monumental flights of steps.

This view, looking as it does down the lagoon toward the great basin, represents a part of the grounds where the buildings are most thickly clustered; where distances are at the minimum, and where the perspective is the least extended. Picture then the grand scale on which the scheme is being worked out; the care and attention that has been given to produce imposing effects and magnificent vistas, and the enticement offered to architects and artists to create masterpieces. Surely the plan is incomparable, and its culmination will close an epoch in the history of art.

Rain.

The brooks leaped up to catch it,
  And the breezes held their breath:
The lilies sprang up boldly
  And shook their heads at death.
The roses blushed to crimson
  At the kisses of the rain,
And the sun looked out and saw it
  With a flush of jealous pain.

—May Riley Smith.

When Writing a letter be sure to sign it. Too often we get letters with the name of the post-office, but no County or State. One such came recently, and we looked into the Postal Guide and found there were places by that name in 13 States. That order for goods will have to wait until another letter comes to give the proper address. Be sure to stamp your letter, or it may go to the dead letter office.

We Club the American Bee Journal and the Illustrated Home Journal, one year for $1.35. Both of these and Gleanings in Bee Culture, for one year, for $2.15.

Queries and Replies.

Indications of Swarming.

QUERY 773.—Is there any way in which to determine, with certainty, when a swarm is about to issue, except taking out the brood-frames and examining the queen-cells?—Minn.

No.—C. H. DIBBERN.

I do not know of any.—EUGENE SECOR.

I have never found any other way.—M. MAHIN.

No; not even by the way you suggest.—R. L. TAYLOR.

None that I know of, and even that is not always sure.—J. E. POND.

Yes; by hearing the piping of the young queens.—DADANT & SON.

No. It is not uncommon for swarms to issue before starting queen-cells.—G. L. TINKER.

No, and I do not think I could tell very definitely by looking at the brood-frames.—C. C. MILLER.

No; nor is that way absolutely certain. There are other ways of making a close guess.—JAMES HEDDON.

There are several outside indications, but to be extra sure, it is best to examine the frames.—H. D. CUTTING.

Yes; by observing the condition and actions of the bees it can be told, but with no absolute certainty.—J. P. H. BROWN.

Not with the prime or first swarm. The piping of the young queens announces the advent of after-swarms.—G. M. DOOLITTLE.

You can no more tell to a "certainty" when a swarm will issue than you can what verdict a jury will bring in. You may guess right sometimes, and again miss. Bees change their minds sometimes after their haversacks are packed for the journey.—MRS. L. HARRISON.

No; you can only guess when a prime swarm is likely to issue. No signal in the way of "piping" takes place except when after-swarms are about to issue. I notice every season that the colonies I expect early swarms from are not certain to be the first to cast swarms.—G. W. DEMAREE.

No. It cannot be "determined" to a "certainty" when a swarm will issue—not even by examining the brood frames. There are indications upon which you can guess pretty nearly, but it will only be a *guess*.—THE EDITOR.

DEPOSITING POLLEN.

1. If, as Mr. Doolittle says, "the bees that gather the nectar do not deposit it in the cells," what do they do with the pollen? 2. Have you ever heard of bees being wintered by putting a nice stewed chicken in the hive for them to feed on? A friend told me he had wintered them that way often. 3. Is it a good plan to transfer a colony from a box-hive immediately after they have cast a swarm, and furnish them with a new queen? Bees in this locality do very well, but there are no large apiaries here. JACOB EVERMAN.

North Middletown, Ky.

[1. The bee which brings in pollen thrusts its legs into the cell where the pollen is desired, shuffles the pollen off, and leaves the two loaves there in a loose shape. Soon a young bee comes along and packs the pollen as we generally see it.

2. Yes, but it is all a hoax. Mice, or something else beside the bees make way with the chicken—if it is made way with.

3. Bees can be transferred at almost any time of the year, but the best time is when the fruit trees are in bloom. There is then less honey and brood in the hive than at almost any other time of the year, hence little waste, and the bees are obtaining honey enough to repair all damage promptly, as a general thing.—G. M. DOOLITTLE.]

Whitewash for Out-Door Work.

Here is a whitewash that is said to preserve out-door work: To three pounds of lime add one pound of cheap grease, and then add hot water until it is of the right consistency. Apply hot.—*Exchange*.

Topics of Interest.

Bee-Keepers and the Illinois Legislature.

J. M. HAMBAUGH.

When I left Springfield, I fully resolved to send a statement to the Bee Journal immediately, giving to its many readers an account of the final disposition of the bills before the Legislature relative to bee-culture, but when I arrived at home, I found so much to do to get my affairs in shape, that it has seemed impossible to find time to write.

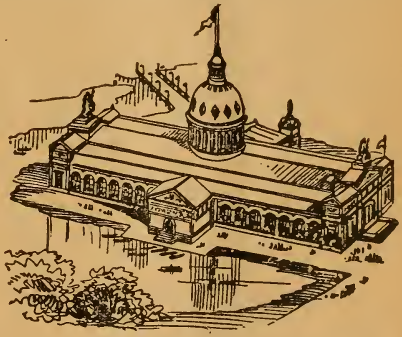
I am very well satisfied, all things considered, with the result of our efforts in behalf of the bee-keeping industry. We have succeeded in obtaining an appropriation of $500 yearly for the purpose of publishing our report. This I look upon as quite an achievement, and it will certainly give apiculture a prominence among the industries, and advance the pursuit to the position it justly deserves.

When this bill was called up on second reading, Hon. Reid Green, of Cairo, moved that the enacting clause be stricken out, and before I could realize the situation, he had carried his point, and the bill was killed by a viva voce vote. I moved to reconsider the vote by which the enacting clause was stricken from the bill, and called for the ayes and noes, and with the kind assistance of many friends, we got the bill reinstated, and ordered to a third reading. When called up for final consideration in the House, it met with some opposition, but finally passed by a creditable majority.

About the same time the spraying bill, No. 607, was reached in its regular order upon the calendar, and we had a lively tussel to pull it through, the objection being sprung on the spot, that it was antagonistic to the interests of the fruit growers, and notwithstanding I had the testimony of the leading horticulturists and entomologists at hand, which was proof of their being in harmony with the bill, and read them, yet there were some skeptics, and they plied their arguments wherever they could make them effective, and it was only by herculean efforts on the part of the friends of the bill that we successfully carried it through.

I think I can safely say that, should the bill never become a law, it has done a world of good toward the education of the people as to the proper time for spraying, and I am sure that should bee-keepers become damaged from spraying trees while in bloom, between now and the sitting of the next Legislature, there will be no trouble in having the bill passed.

When both these measures reached the Senate, I was extremely solicitous for their welfare, and immediately wrote to some of our representative bee-keepers to come to the rescue, and do a little missionary work in behalf of the cause, and while they did what they could by correspondence, it seems that they were all too busy to come in person, and as I was a new man, I naturally had but little confidence in my own efforts towards convincing the Senators of the merits of the bills. Well, the appropriation bill, as before stated, passed in good shape, but the spraying bill encountered no obstacles, until it was called up on third reading, and it was called at a time when many of the Senators were over in the House.



Illinois State Building at World's Fair.

The House was engaged in the consideration of Senate bills on third reading, and most of the Senators were interested in bills that seemed to require their personal attention; hence, were absent from their posts of duty at the time House bill 607 was called up, and it received but 21 votes.

I am sure that, had all of the Senators been in their seats, it would have passed that body and become a law, but it encountered some opposition in the Senate, the same as in the House, and I must say here, that the thanks of the fraternity are especially due to Senator Highbee, for his valuable efforts in championing the cause of the bee-keepers in the Senate, as well as to Hon. Frank Jones and Dr. Shirley in the House.

The foul-brood bill got no further than second reading in the House. The Hon. Mr. Smith, in whose hands it was entrusted, was detained at home on account of sickness, until it was too late to make an effort, and it had to succumb, with a large number of other bills upon the calendar.

As regards the appropriation for the World's Columbian Exposition, when I saw there was no chance whatever to get a special measure through for the $5,000 appropriation, I wrote a letter to each member of the State Board of Agriculture, stating that if they could not guarantee us the $5,000, or pro rata amount asked for, I would offer an amendment to the bill when it came to second reading that one-half of one per cent. of the gross appropriation be allowed for the bee-keepers' exhibit. I received letters from over half of the members, all stating that they were anxious to do justice to us, and when the proper time came they would do their best to give us entire satisfaction.

This was the best I could do. There was a possibility of defeat had I resorted to the amendment, besides giving the Agricultural Board cause for some reproach and harsh criticism toward us, and I am satisfied they are honorable gentlemen, and will treat us fairly.

When the appropriation bill reached the Senate, I had the accompanying circular placed upon every member's desk.

I have no apologies to offer, but will frankly say, that I did my best.

Spring, Ills., June 22, 1891.

FACTS CONCERNING BEE-KEEPING.

The bee-keepers of the State of Illinois are a part of the commonwealth, and they bear their portion of the State's burdens. Bee-keeping is one of the rural pursuits, and as such is deserving of recognition from the people.

That it is one of great importance, we believe cannot be successfully controverted, and yet we believe it has never been fully appreciated by the people. From a scientific point of view, the student of nature can find unexplored fields of thought. In a colony of bees, he can find food for many days of deep reflection, and wonderful admiration and research. In the hidden mysteries of the bee-hive, he can but be startled at the wonderful perfection of God's creation, as revealed through these curious little insects.

It is a well-established fact that the cross fertilization in the vegetable kingdom is largely due to the visitation of insects, during the time of their bloom; and when there is an absence of these visitations through protracted cold weather, or from other causes, the crop is more or less injured. The insect that figures most conspicuously in this important work of Nature is the honey-bee.

It has been demonstrated that if we exclude the insects entirely from white clover, by encasing it in glass or wire screen, there will be no seed formed in the heads.

The seed of red clover is almost wholly dependent upon the bumble-bees for cross fertilization; hence, no seed forms upon the first crop, but upon the second, as this insect does not become populous until the first crop is harvested. The ligula, or tongue of the honey-bee, is not of sufficient length to reach the bottom of the corolla, where the nectar is found, hence their visits are futile, and fertilization a failure.

The reverse is the case with the alsike clover. The first crop produces the seed, as the honey-bees, lured by the nectar placed in the corolla, are constantly passing from bloom to bloom, and large quantities of honey are being stored yearly from this plant.

When the balmy breath of Spring once more invites the myriads of tiny plants to peep forth from Mother Earth, the busy little bee seeks the modest daisies and fragrant flora, and as the mantle of white is silently wrapped about our orchards of plum, apple, peach and other fruit, the gentle hum of the honey-bee can be heard. Lured by the heavenly banquet, it sips at the shining goblets, and as it flits from bloom to bloom, it conveys upon its person the pollen dust, from stamen to anther, which is the life-giving germ; and thus one of Nature's most wonderful works is complete.

A. J. Cook, Professor of Zoology and Entomology of the State of Michigan, says:

"The bees are of signal benefit to the fruit growers, and so every fruit grower should, on selfish grounds, protect, rather than injure or destroy bees. That bees secure better crops is as certain as any fact in science. The fruit grower should desire that bees swarm in his fruit trees during the blooming season."

Our scientists are recognizing this important truth, that it is essential for our orchards, during the time of their bloom, to "literally swarm with bees," to realize a bountiful yield of fruit, and our wide-awake horticulturist is becom ing convinced of this fact, and is co-operating with the bee-keeper in this important work.

The time is not far distant when the established horticulturist will likewise become an apiarist, or will have an apiary established in the midst of his orchards, and thus, while performing an essential part toward the proper fertilization of the fruit bloom and seed product, he is assisting in the production of a sweet that is fit for the gods—honey! Delicious honey! "Not made, but gathered from the nectar of flowers, which is secreted according to the rules of Nature's laboratory."

And now, as to the future possibilities of bee-culture. I believe that if it were possible to gather the sweets from the flora of the State of Illinois, that are yearly lost, we could nearly or quite double the record given in our census reports of the product of the entire United States. Bee-culture, under modern, improved methods, is making long strides in this direction.

I have produced 15,000 pounds of honey from 18 square miles of territory, and within the borders of this territory were more colonies of bees belonging to other parties than the number under my supervision.

We have in the State of Illinois 56,000 square miles of territory, not including, of course, the lakes and rivers. Within the borders of the 18 square miles previously referred to, is a lake 4 miles long by from ¼ to ½ mile wide. If you will compute this amount, at the rate of 15,000 pounds of honey to every 18 square miles of territory, you will have the neat little sum of 46,665,000 pounds of honey for the State of Illinois.

The census of 1890 gives the total product of the entire United States and territories as 25,743,208 pounds. That of the State of Illinois alone was 1,105,689 pounds. From this you can base your calculations as to the undeveloped condition of the bee industry, and the importance we could attain in this direction by developing the same.

We believe that we are entited to some recognition from our law makers, and we believe that if you will grant us the small amount asked for as an appropriation to enable us to publish our reports, it will encourage the industry, increase our wealth, and rebound two fold to the good of our fellow men.

Remember, we are not only an essential adjunct to the fruit and seed growers of the country, but we are storing a sweet that would otherwise be lost; hence, our product is that much saved from the economy of Nature. We occupy no territory, and do not interfere with any other pursuit or industry.

Bee-Keeping in Minnesota.

C. THEILMANN.

Many colonies of bees have died in this vicinity since last Fall, and many are still too weak to gather the harvest.

I lost 4 colonies out of 225, and the remainder are hardly as strong as is usual at this season, but swarming has been in progress since May 29. The feeding of so much sugar, which was made necessary by the poor crop of last year, has proven fatal to the queens, and workers, too, and my argument that sugar cannot supply the place of honey as food for the bees, and preserve their health. and strength, has been more forcibly demonstrated during the past year than ever before, and I am fully convinced that the feeding of sugar to our bees should not be resorted to as long as good honey can be had, for it will weaken the constitution and destroy the vitality of the queens, and discourage the workers.

I have noticed this fact for the past seven or eight years, in the case of nearly every colony to which any considerable quantity of sugar had been fed. Not only was this so with regard to the weak colonies, that are to be found in every apiary, but in the case of some of the very best and strongest colonies, whose queens had kept the brood-chamber so full of brood until Fall, that but very little honey could be stored in them, thus necessitating the feeding of sugar for Winter stores.

In the following April and May a very marked difference could be noticed in the colonies to which the sugar had been fed. They could not make such headway as those colonies which had honey alone for their Winter stores.

I was obliged to feed considerable sugar last season to keep my bees from starving, and I never had so many queens superseded by the bees as has been the case this Spring, and many of the swarms that issue form only a small cluster, thus indicating that a great many of the queens have lost their strength and vigor, and I am convinced that the excessive feeding of sugar is the cause.

It appears that sugar (I feed only the granulated) contains considerable sulphuric acid, which is used in refining it, and the brace combs on top of the frames were colored green and blue after feeding the bees with sugar. I would like to see an analysis of the granulated sugar in the market.

We had a soaking rain on the 17th inst., which was badly needed, as there had not been rain enough to moisten the ground deeper than two or three inches since seeding time, but crops are looking tolerably well, and a fair harvest may be expected.

White clover is plentiful, and in full bloom, and secretes nectar abundantly, as has all the bloom so far this season.

Linden trees are healthy, and full of buds, and will be in bloom about July 1.

Theilmanton, Minn., June 20, 1891.

Review of Mr. Cowan's New Book.

ERNEST R. ROOT.

That new scientific work is entitled, "The Honey-Bee: Its Natural History, Anatomy and Physiology, by Thomas William Cowan." It is a small book, 6½ by 4½, and contains 192 pages; but it represents an *immense* amount of painstaking work. It is neatly bound, and appropriately embossed in gilt. It is wholly scientific, and therefore it has little or nothing to say regarding practical apiculture, that part being entirely delegated to a former work of the author's.

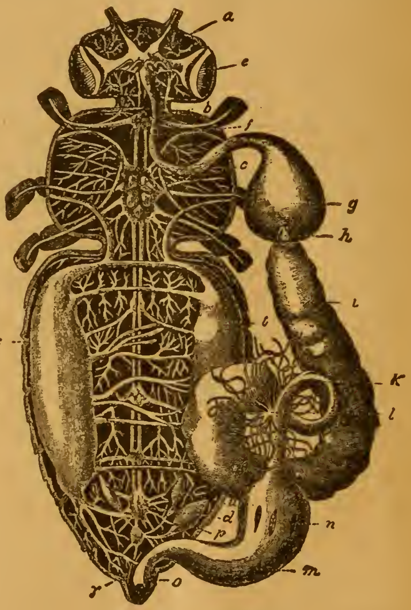
It is not a book that can be read like a story, but it is one that requires attention and careful study. Unlike some of the larger works, it is condensed, but still seems to cover the most that is important from a scientific point of view regarding our little friends, the bees.

One thing that struck my eye particularly, was the beautiful frontispiece engraving, showing almost the entire anatomy of the bee; and I became so much interested in studying it, that I here reproduce it for the benefit of our readers.

Now, if you have a little patience I will try to give you the gist of my reading, and at the same time avoid the use of scientific terms, so far as possible. I may remark, in passing, that the anatomy of the bee is, in many respects, similar to that of the human body; and in describing the various organs and functions, I will endeavor to call attention to those that are similar in our own frames.

I will first call your attention to the alimentary canal—that is, the organs of digestion and assimilation. What is digestion? Our author says, "It is the separation of the nutrient part of food from the non-nutrient, and the conversion of the nutrient into a liquid fit to mingle with the blood, and thus nourish the body of the insect."

We all know how the bee gathers up its food through its wonderful and delicate little tongue. It then passes into a little tube just below the point A, in the engraving, which is called the esophagus, or gullet. We find a similar organ in our own bodies, leading from the mouth and communicating directly to the stomach. This esophagus passes through the waist of the bee, or thorax, as it is called, and to the honey-stomach, G, in the abdomen.



Section of Honey-Bee, showing its Internal Organs.

It is in this little sac, although it can hold but a tiny drop at a time, that millions and millions of pounds of nectar are carried annually, and stored in our combs. This sac, G, is located in the forepart of the abdomen, or "hinder" part of the bee, as the boy said.

Several years ago I had a curiosity to know what the bees were working on. I suspected that they were gathering juices from over-ripened raspberries on the vines. In order to satisfy myself I grasped a bee by its waist and abdomen, and pulled until the parts were separated, and then was revealed the little honey-sac, which had disengaged itself from the abdomen. This contained a light purple or wine-colored liquid. The size of this honey-sac, as nearly as I can recollect now, was a good big eighth of an inch; and I should remark that the bee had all that it could contain in its little pocket. Cheshire says that, when the honey-sac is full, it is 1/7 of an inch in diameter. This would agree with my observations.

STOMACH-MOUTH.

The next thing that engages our attention is a sort of valve, which has been called the stomach-mouth, and is located between the honey-stomach and the true stomach; viz., at H. This is one of the most interesting of organs; and I suppose that no part of the internal anatomy of the bee has been studied more, theorized about, dissected, and examined, than this delicate and beautiful little valve. At H its true structure does not appear. It has been likened in appearance to a bud just about to open. It is a sort of valve, fringed on the inside with rows of bristles, or hairs, the object of which seems to be to separate the pollen grains from the nectar, the former passing into the stomach L.

TRUE STOMACH.

This corresponds to the stomach in our own bodies, and performs the same function in the way of digestion in converting the nutrient particles of the food into blood. The inside walls of the stomach have certain cells which perform certain offices; but without more definite engravings it will be impossible to describe them in detail.

The next organ is the small intestine, or, as is sometimes called, the "ilion." In the human body the small intestines are much more elaborate. It is in this that the food, after its digestion, passes, and where, by absorption, the nutrient particles not already absorbed pass into the blood, and so on throughout the system.

You will notice, also, at L, some small radiating filaments. These are called the malphygian tubes. It is not certain what their office is, but it is thought that these are the urinary organs.

At the end of the small intestine, K, you will notice an enlargement, M. This is what is called the colon. Although the appearance of the colon in the bee is different from that in the human body, yet its functions are very much the same; and if allowed to become dammed up by excreta (that is, by retention during Winter) it is liable to cause disease in the bee, just the same as in the human body. On page 112 Mr. Cowan says:

"From the colon, what remains of the undigested food is expelled by the anal opening (frontispiece, *o*). For this purpose strong muscles exist, by which the colon is compressed, and the excreta ejected.

"The quantity of the excreta voided, usually of a dark brown color, is regulated by the nature of the food; bad honey, an improper substitute for honey (such as glucose) producing a larger amount, while good honey and good syrup produce less, a larger proportion of it being digested and absorbed.

"It is, therefore, important that bees should have good food, as, in a healthy condition, workers never void their feces in the hive, but on the wing. In the Winter it is retained until voided on their first flight."

So you see, then, that bad food makes mischief, just the same as it does in the human body, and it is in this that the overplus of feces is stored during the Winter.

HOW THE BEE EMPTIES ITS HONEY-SAC.

After the nectar is gathered, it is then transferred from the tongue to the esophagus, and thence to the honey-stomach, G. It has been shown repeatedly by experiment that there are a great many more pollen grains in the nectar than in honey; hence the little stomach-mouth, H, comes into play in separating the grains from the nectar.

On arrival at the hive, the bee regurgitates—that is, expels the contents of the honey-sac into the cell; but during its stay in the honey-sac the nectar has undergone a change; that is, it has been converted, says Mr. Cowan, from the cane sugar of nectar into the grape sugar of honey, by the agency of a certain gland.

But the bee may not regurgitate the honey, for it may pass directly into the chyle-stomach. We see, therefore, that, when a swarm issues, the bees, after filling their honey-sacs to their full capacity (a very small drop), can carry with them a supply of food to last them for several days; and, even while on the wing, through that little stomach-mouth, H, they may take nourishment. So much for the alimentary canal, its office in digestion, and the honey-stomach.

THE NERVOUS SYSTEM.

Let us now turn our attention to the nervous system. By referring to the engraving you will see parallel and medial lines passing the entire length of the bee, and finally communicating with the brain, A. Along at irregular intervals will be seen thickened masses, called "ganglia." These are really little brains, and, as in our own bodies, preside over the involuntary muscles. The largest ganglion is the brain, at A, and is the seat of voluntary action and intelligence.

One is surprised in reading through chapters 10 and 11 of Mr. Cowan's work, how thoroughly scientists have studied the structure of the nervous system as found in the bee. Even the tiny brain has been dissected, and its various functions pointed out—that is, what parts communicate with the antennæ, what part with the eyes, etc. I was greatly interested, in looking over the sizes of the different brains found in different insects. I quote here a paragraph from page 70:

"It is generally admitted, that the size of the brain is in proportion to the development of intelligence; and Dujardin, who made careful measurements, gives the following sizes: In the worker bee the brain is 1/174 of the body; in the ant, 1/286; the ichneumon, 1/400; the cockchafer, 1/3920; he dytiscus, or water-beetle, 1/4200."

In man the proportion is 1 to 40, I believe; but we all know that he is of the very highest order of intelligence. However, we are not very much surprised to learn that the bee has the largest brain of any of the insects, exceeding by far even that of the ant, whose intelligence we have admired over and over again.

THE RESPIRATORY SYSTEM.

It is also interesting to inquire how the bee breathes, and chapter 8 points out to us the wonders of the nervous system in the bee. By referring to the engraving given, we observe a couple of large air-sacs, called the "trachea," which corresponds somewhat to the lungs. These are located on either side of the abdomen, as at T. They are divided and subdivided into smaller trachea, and in turn ramify all through the entire body.

Instead of fresh air being received in at the mouth, as with us, fresh supplies are admitted through 14 little mouths, called "spiracles." Ten of these are located on the abdomen—five on each side—and are situated just about on the margin of the scales, between the dorsal and ventral segments. Four others are situated on the thorax, or waist, two on each side.

You may, therefore, decapitate a bee and it will continue breathing as before. If you place a pencil dipped in ammonia near its body, the headless insect will struggle to get away; and if the pencil touches its feet, the ganglia already spoken of communicate the sensation to the other ganglia, and at once all the feet come to the rescue to push off the offending object, or, it may be, to take a closer hold so the sting may do its work.

Besides that, if bees are daubed with honey, they will die very soon from strangulation, because these little mouths or spiracles are closed. A bee may swim around in a trough of water, and, though its head be entirely out, it will drown just the same, because these spiracles, or breathing-mouths, are submerged.

On a hot day, if the entrance of a hive be closed, the bees will soon begin to sweat; and, thus becoming daubed, the delicate spiracles are closed, and the bees die.

ROYAL JELLY, AND WHAT IS IT?

Nothing in the book interested me more than the discussion in chapter 18 in regard to the royal jelly. Cheshire insists that it is *secretion* from one of the glands; but Prof. Cook has maintained that it is the product of the chyle-stomach; and Mr. Cowan proves conclusively that this is the right view, and and eminent authority is not wanting to sustain them.

This chyle is produced in what is called the chyle-stomach, shown at L, in the engraving; and worker larvæ are fed on this concentrated food for three days, after which they are weaned. "On the fourth day this food is changed, and the larva is weaned; for the first pap has a large quantity of honey added, but no undigested pollen, as Prof. Leuckhart had stated. The drone larvæ are also weaned, but in a different way; for, in addition to honey, a large quantity of *pollen* is added after the fourth day." And right here I cannot do better than quote from Mr. Cowan:

"Microscopic examination showed that, in the queen and worker larvæ, there was no undigested pollen; whereas in the drone larvæ, after the fourth day, large numbers of pollen grains were found. In one milligram, no less than 15,000 pollen grains were counted, and these were from a number of different plants......

"This work of Dr. Planta's, we think, conclusively proves that the food is not a secretion, and that the nurses have the power of altering its constituents as they may require for the different bees...

"Royal jelly is, therefore, chyle food, and this is also most likely the food given to the queen-bee. Schœnfeld has also recently shown that drones are likewise dependent upon this food, given to them by workers, and that, if it is withheld, they die after three days, in the presence of abundance of honey.

"This, he thinks, accounts for the quiet way in which drones perish at the end of the season. It will now be easily understood, that, if weaning of the worker larvæ does not take place at the proper time, and that the first nourishing food is continued too long, it may be the cause of developing the ovaries, and so produce laying workers, just as the more nourishing food continued during the whole of the larval existence in the case of a queen develops her ovaries, or even in the absence of a queen the feeding of workers on this rich food may tend to have the same effect. This, then, is the solution of royal jelly and brood food."

I would say, in conclusion, that I enjoyed greatly studying up this subject. It used to be an old passion of mine; but it took such an immense amount of time, and caused such a severe strain on my eyes, that I abandoned it.—*Gleanings.*

Apicultural Notes from Alabama.

EDW. CLARK.

Bees are working on the wild grape and chestnut bloom.

The persimmon trees did not yield much honep this year.

I have had 4 swarms this season, and divided the first one a few days ago.

Golden-rod yields no honey here, although there is a great deal of it in this vicinity.

Honey-dew has been quite plentiful for the past few weeks, and the bees have been filling their combs very fast with it.

The prospects are fine for a good flow of honey from sourwood and horsemint. The former will be in bloom in a few days.

On account of the dry weather, the poplar bloom did not last as long this season as usual, but the bees did not waste any time while it was in bloom.

Will the editor, or some of the readers of the BEE JOURNAL, please tell me how to make a trap for catching wild bees.

Nat, Ala., June 13, 1891.

Wavelets of News.

Planting for Honey.

If there was any plant that I would recommend for honey alone, it would be the raspberry; it continues in bloom for three weeks, and a peculiarity about it is, that bees will be working upon it immediately after a hard shower. The heads hang down, and the rain does not wash the honey out.—R. F. HOLTERMANN, in *Farmers' Advocate.*

Paste to Stick to Tin.

I have found it very difficult to get labels to stick to tin; have tried many sorts of pastes, but not until recently have I found out how to make a paste that is sure to stick. It seems strange to me that I should have been so long trying different recipes without it once occurring to me to add a little honey to the paste, or mucilage. Since I have added honey the labels stick well to tin boxes.

I make a paste as follows: Corn starch, one ounce; water, one-half pint; boil a few minutes, stirring until it thickens slightly, then add 2 ounces of extracted-honey, and mix well. Keep in a cool place. I keep mine in my ice-chest.—DR. J. W. VANCE, in *Wisconsin Farmer.*

Stingless Bees.

The stingless bee, or *Mellipone*, of South America, belongs to a different genus than the *Apis* or hive bee. One or two European and American bee-keepers have procured a few colonies, but they have usually lost them the first Winter. These bees build comb, store honey, and rear brood differently, and according to all that has been learned of them, are not great honey gatherers, and are not suited to the production of honey in this country.—*American Agriculturist.*

Have your honey extractor, pails, cans and kegs ready for the honey flow?

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
July 30.—Carolina, at Charlotte, N. C.
A. L. Beach, Sec., Pineville, N. C.

Aug. 6.—Rock River, at Sterling, Ills.
J. M. Burtch, Sec., Morrison, Ills.

Sept. 3.—Susquehanna County, at So. Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—P. H. Elwood....Starkville, N. Y.
SECRETARY—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

Bee and Honey Gossip.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Remedy for the Nameless Disease.

On page 806 G. B. Replogle asks for a remedy for the "nameless bee disease." Let him fill a comb with brine and place it in the brood-nest. I have had excellent results from this remedy this season. The disease has disappeared from every hive thus treated. I cannot say yet whether or not it will return, but if it does, the remedy is simple and easily applied. This "nameless" disease has been getting worse in my apiary every year, for a number of years, and was making serious inroads on my honey crop, so that I am very glad to find something that will check it, if it does not entirely cure it.

Hudson, N. Y. JAS. MCNEILL.

Cleaning Wood-Zinc Honey-Boards.

Answering W. E. Forbes' inquiry on page 807, I will say that I use 2-rowed zinc, with about ⅞-inch wood strips between. I first scrape off all the propolis that I can conveniently with a dull knife, then take an old No. 9 tin wash boiler, place it on a couple of flat stones, to allow a fire to be kindled underneath it, fill it with water, and start the fire. When the water begins to boil, I immerse the boards in the water for a minute or two, when the wax will all be melted off and rise to the top. I use a pair of blacksmith's tongs to remove the honey-boards from the water, and throw them on the grass almost as clean as new. When wax accumulates on the water, I remove it with a dipper, to prevent its adhering to the honey-boards as they are withdrawn from the water, and place it in another vessel. Refill the boiler when necessary. I can clean 100 nicely in a day. ABEL GRESH.

Weedville, Iowa.

Dry Weather in New Jersey.

The weather is very warm and dry here, and unless we have rain soon, I am afraid the honey crop from clover will be short. The bees have been gathering honey rapidly during the past few days, and are working in the sections nicely. I have had but 5 swarms from 31 colonies, and the bees show no indications of further swarming.

WM. HOUSEL.

Wertsville, N. J., June 14, 1891.

[The rain came on June 18, and has, no doubt, changed the prospects for the better.—ED.]

Honey-Boards—To Clean.

On page 807 I notice a request by W. E. Forbes for the best method of cleaning wood-zinc honey-boards. The best way I have found to clean them, is to dip them in boiling water. It is also a good way to clean the propolis from empty frames and crates. Prospects are good for a crop of honey from basswood.

D. H. COGGSHALL.

West Groton, N. Y.

Swarm-Hivers.

I have been trying Alley's latest swarm-hiver this season, but have not met with success. The bees do not even attempt to swarm, it seems to discourage them, and the drones get into the cones and die there, clogging them up, and rendering it necessary to clear them out every day. Are any of the swarm-hivers of any practical use? I would like to hear from those who have used them. W. A. HARRIS.

New York, June 22, 1891.

Hiving Bees.

On page 807 Mr. Shaffer says to hive bees with smoke, but I think he is wrong, for when you smoke the bees the smoke goes into the hive and drives the bees out. I have tried this method, and the bees went off every time. I get my bees in a swarming-box, and put a sheet in front of the hive, shake them on it, and let them run in, and I have no trouble in this way.

Venice, Ills. JAMES T. FENNELL.

◆

Wish to Obtain Information Free.

I cannot understand why every person who keeps bees does not provide themselves with a good bee-periodical. There are numbers of persons keeping bees who desire to obtain their information from those who subscribe to and pay for a good bee-periodical, and they wish to obtain it *free*. Bees are doing splendidly in this county. White clover, which is our source of honey supply, is quite plentiful in this locality.

MATTHEW REBHOLZ.

Kane, Ky., June 17, 1891.

◆

Poor Prospect for White Honey.

Bees are in good condition in this locality, and are storing what appears to be honey-dew. I have taken about 40 pounds of very dark honey. I have 10 colonies, and expect some of them to cast swarms. I do not think we will get much white honey this year.

BERT VIAGER.

Moline, Ills., June 23, 1891.

◆

Hiving Swarms at Leisure.

I have kept bees for three years, commencing with 2 colonies. My first swarm "took to the woods," and then I purchased half a dozen of Alley's drone and queen traps, and have not lost a swarm since. Last year, if I was very busy when a swarm issued, I did not drop everything to hive them, but would allow them to go back into the hive they came from, and when it was convenient, would remove the old hive, and place the hive I wished the swarm to occupy in the place the parent colony had occupied, and put in one or two frames of brood, bees and honey from the old hive, transfer the super to the new hive, fasten the trap (with the queen in) at the entrance, draw the nail from the queen-escape, and the work was done. As fast as the bees returned from the field they would enter the new hive, and everything, as far as I know, was just as well as if I had left my washing, or delayed dinner, or let baby cry, to attend them at once. I have 11 colonies, Spring count, and 7 of them are working like little nailers in the sections. I am trying (and successfully so far) to keep them from swarming during the white honey flow. There is plenty of white clover in this vicinity, and very good weather, just now, at least, for the bees to gather the nectar.

MRS. PARKER ERWAY.

Hastings, Mich., June 16, 1891.

◆

After-Swarms.

After-swarms that issue in April and May give fine results here. About May 21, last year, a small swarm containing about a quart of bees, issued from an Italian colony in an 8-frame Langstroth hive, it being the fourth swarm cast by that colony. I gave them an 8-frame dovetailed hive, with one Langstroth brood-comb, containing about 2 pounds of honey, but no brood nor eggs. Horsemint was beginning to yield nectar, and they built up rapidly, and by the time the horsemint yield was over, this small colony had filled the brood-chamber with brood. About July 14 I put on the upper story, containing five wide frames —8 sections to the frame—making 40 sections, with small starters in each one. Sourwood and cotton had begun to yield, and by the time that source of supply was exhausted, every section was filled with as plump sealed honey as you ever saw.

WILLIE DOUGLASS.

Lexington, Tex.

You Need an Apiary Register, and should keep it posted up, so as to be able to know all about any colony of bees in your yard at a moment's notice. It devotes two pages to every colony. You can get one large enough for 50 colonies for a dollar, bound in full leather and postage paid. Send for one before you forget it, and put it to a good use. Let it contain all that you will want to know about your bees—including a cash account. We will send you one large enough for 100 colonies for $1.25; or for 200 colonies for $1.50. *Order one now.*

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ADVERTISING RATES.

20 cents per line of Space, each insertion.

No Advertisement inserted for less than $1.00.

A line of this type will admit about eight words. ONE INCH will contain TWELVE lines.

Editorial Notices, 50 cents per line.
Special Notices, 30 cents per line.

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On **30** lines, or more, 4 times, 20%; 8 times, 25%; 13 times, 30%; 26 times, 50%; 52 times, 60%.
On larger Advertisements, discounts will be stated, upon application.

Advertisements intended for next week must reach this office by Saturday of this week.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to pay for another year.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. It costs:

For	50 colonies (120 pages)	$1 00
"	100 colonies (220 pages)	1 25
"	200 colonies (420 pages)	1 50

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The **7** above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75
Orange Judd Farmer	2 00	1 75
Farm, Field and Stockman	2 00	1 75
Prairie Farmer	2 00	1 75
Illustrated Home Journal	1 50	1 35
American Garden	2 50	2 00
Rural New Yorker	2 50	2 00
Nebraska Bee-Keeper	1 50	1 35

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the BEE JOURNAL (with $1.00 to pay for the same), or 2 subscribers to the HOME JOURNAL may be sent instead of one for the BEE JOURNAL.

Clubs of 5 New Subscriptions for $4.00 to any addresses. Ten for $7.50.

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00. For sale at this office.

◆

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

◆

Red Labels are quite attractive for Pails which hold from 1 to 10 lbs. of honey. Price, $1.00 per hundred, with name and address printed. Sample free.

◆

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

◆

Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

◆

Binders made especially for the BEE JOURNAL for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

◆

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

It is a Prize in Itself.—I have just seen the ILLUSTRATED HOME JOURNAL for June, with the Rebus and offer of prizes for its solution. As the paper, at 50 cents a year, is a prize in itself for the amount, I take pleasure in enclosing it, and if my answer to the Rebus is correct, you can place me as a contestant for the prize. H. E. LAING.

Chicago, Ills.

◆

☞ The Union or Family Scale has been received, and I am much pleased with it. W. H. KIMBALL.

Davenport, Iowa.

◆

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms.

◆

We send both the Home Journal and Bee Journal for one year, for $1.35.

◆

Very Well Pleased. — The Sewing Machine and Scales are received in good order, and I am well pleased with them. They do good work. The sewing machine is ornamental as well as useful. The scales are very handy for family use.—G. RUFF, Burlington, Iowa.

◆

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

◆

Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul-brood, can be procured at this office at 25 cents per ounce, by express.

HONEY AND BEESWAX MARKET.

NEW YORK, June 26.—Receipts are large from Florida, Georgia, Louisiana and Texas, and demand good. We quote: Common, 70c per gal.; good to choice, 75@78c.; orange bloom, 7@7½c per lb. Beeswax firm at 28@30c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, June 27.—Very little choice white 1-lb. comb-honey on the market. Comb, 1-lb., 14@15c; 2-lb., 10@12c. Extracted, 6@6½c. Beeswax, 25c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, June 27.—Trade good in extracted-honey, with plenty of the new crop in market. New comb-honey is plentiful. We quote: Choice comb, 14@15c. Extracted, 5@8c. Beeswax is in good supply and demand at 25@28c for good to choice yellow.
C. F. MUTH & SON, Freeman & Central Aves.

CHICAGO, June 20.—Demand for comb and extracted honey not very active. We quote: Comb, 12@17c; extracted, 7@8c. Beeswax, 30c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, June 27.—The demand for honey is very light; supply fair, at 12@14c; extracted, 5@7c. The demand for beeswax is good, at 25@27c; supply light.
HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, June 27.—Demand light, and the new honey offered not very white; a fancy article of new comb-honey will sell at 17c. We quote: Comb, 15@17c. Extracted, 6@8c, as to color and quality. Beeswax: Demand equal to supply, at 27.
R. A. BURNETT, 161 S. Water St.

BOSTON, June 26.—Demand and supply light. We quote: Comb, 16@18c; extracted, 7@9c. Beeswax: Demand and supply light, at 28c. BLAKE & RIPLEY, 57 Chatham St.

ALBANY, N. Y., June 19.—Honey market is slow, with little call for comb-honey, as the weather is hot. Extracted, quiet and steady, at 5@8c. Beeswax, in demand at 28c.
H. R. WRIGHT, 326-328 Broadway.

NEW YORK, June 26.—Demand for honey, quiet, and shipments increasing. We quote: New crop, comb, 14@15c. Extracted—Florida, 7@7½c. Southern, 75@80c per gallon. Beeswax: Demand, light; supply, increasing; good stock, 29@30c.
F. G. STROHMEYER & CO., 122 Water St.

MILWAUKEE, June 20.—Supply of choice comb-honey is very small, and shipments will find a good market. We quote: Choice, 1-lb. sections, 18@20c; common, 10@16c. Extracted, white, in barrels and kegs, 7½@8½c; in tin, 8½@9c. Dark or amber, 6@7c. Beeswax, 26@30c. A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO, June 17.—Market almost bare of honey. We quote: Extracted, 5½@6¼c. Comb-honey, not enough in market to be quotable. Beeswax scarce; demand fair, at 26@27c.
SCHACHT, LEMCKE & STEINER, 16 Drum St.

CHICAGO, June 20.—No choice comb-honey in market. Fancy stock would bring a good price. Beeswax scarce, at 29@30c.
J. A. LAMON, 44-46 S. Water St.

DETROIT, June 27.—No comb-honey and little extracted in the market. We quote: Comb, 14@15c; extracted, 8@9c. Beeswax firm, at 29@30c.
M. H. HUNT, Bell Branch, Mich.

Where are the Apes?—Crofton Croker relates that he once heard a lady in the "swell" society of London say to another: "We are going to have an apiary in our new garden. Won't it be fine?" "Yes," was the hesitant reply; "but where are you going to get the apes?"

☞ The thinnest foundation, as yet. See Norton's advertisement on page 32.

The Honey-Bee: Its Natural History, Anatomy, and Physiology. By T. W. Cowan, editor of the *British Bee Journal*, illustrated with 72 figures and 136 illustrations. $1.00. For sale at this office.

The Bee-Keepers' Directory, by Henry Alley, Wenham, Mass. It contains his method for rearing queens in full colonies, while a fertile queen has possession of the combs. Price by mail, 50 cents.

Lots of Replies.

During the year 1888, we had an advertisement running in the American Bee Journal, and we had the same in several Daily and Weekly papers, but to our surprise we received more than double the number of responses from the advertisement in the American Bee Journal, than from all our others combined.

The fact that we are still receiving letters referring to our advertisement in the Bee Journal, shows that it is preserved and read long after it is received. Newspapers are read and thrown aside and that ends it, but the Bee Journal is preserved, and the advertisements are often noticed and bring responses long after they appeared in it.

We regard the American Bee Journal as a first-class advertising medium.

Cedar Rapids High-Speed Engine Co.,
HENRY RICKEL, *President.*

Convention Notices.

☞ The Carolina Bee-Keepers' Association will meet at the Court House, in Charlotte, N. C., at 10 o'clock a.m., on Thursday, July 30, 1891.
A. L. BEACH, Sec., Pineville, N. C.

☞ The Rock River Bee-Keepers' Association will meet at Sterling, Ills., on Thursday, Aug. 6, 1891.
J. M. BURTCH, Sec., Morrison, Ills.

☞ The ninth annual meeting of the Susquehanna County, Bee-Keepers' Association will be held on Thursday, Sept. 3, at South Montrose, Pa.
H. M. SEELEY, Sec., Harford, Pa.

THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

Our Club Rates are: $1.90 for two copies (to the same or different post-offices); and for THREE or more copies, 90 cents each.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVIII. July 9, 1891. No. 2.

Editorial Buzzings.

The Bees were gathering in their early stores
From willows by the brookside, and I watched
Them flying to their hives, with laden thighs,
All covered with the gold of pollen-dust.

◆

Doolittle's Queen-Rearing is the greatest hit of the decade in bee-keeping. So says A. N. Draper, Upper Alton, Ills.

◆

N. D. West's queen-cell protector and cage are illustrated and described in friend Gravenhorst's *Bienenzeitung* for June.

◆

The Honey Almanac is the result of a suggestion sent to us some 12 years ago by E. Drane, Eminence, Ky. To be sure it was not acted upon at once, but it is now an established fact. He wants credit for *the idea*, and we cheerfully accord it to him.

A New Scale-Insect from California, injurious to fruit trees, is described in the last number of *Insect Life*, by D. W. Coquillett, who furnishes a list of trees attacked by it. Notes on the habits and early stages of an Australian moth, written by the late Henry Edwards, affords a singular instance of change of habit. Twenty years and more ago it was only known as occurring on a species of acacia, called black wattle, but it must now be included among the insects most injurious to fruit trees in Australia.

◆

La Grippe had Mr. C. J. Robinson in its power last Spring. Its endurance is something wonderful. Some time since Mr. R. wrote us the following:

> I am just recovering from an accute attack of *la grippe*. O, heavens, what a disease! If it takes hold in earnest, it demoralizes all the anatomy of the human structure, and shakes out the corporeal frame of bones. Why not execute murderers with *la grippe?*
>
> C. J. Robinson.

◆

The Word "over" should be omitted in the fourth line of the third paragraph of our reply to Mr. Corneil, on page 804. It is a typographical error, for wax cannot be heated in water (except under pressure) to more than 212°, and in Mr. Dadant's statement, which we quoted, the word "over" did not occur. It was an *over*sight in not noticing it in the proof.

◆

Syrian Queens.—One of our Missouri subscribers writes that an advertisement of Syrian queens in the Bee Journal would doubtless secure some orders from his locality. This is merely a hint for breeders of Syrian queens.

◆

Hot Weather is the rule in the Eastern States, as well as in California. In the latter, the thermometer registered from 100° to 116° in the shade for several days last week.

International Fair.—We have received a circular from the management, announcing the opening of the third annual Detroit International Fair and Exposition, which will take place on Aug. 25, and continue until Sept. 4, 1891.

This is an exceptionally excellent opportunity for bee-keepers, as the management have always fulfilled their promises; and have shown that they are actuated by a liberal spirit, and a desire to afford to the fraternity every facility in their power for making the bee and honey exhibit the finest in this country.

Railroad and steamboat lines entering Detroit will make special rates; and the railroad and steamboat lines of Michigan, and most of their connections, will return exhibits free to point of shipment.

The list of premiums in the Apiary Department are the largest and most liberal that are offered by any exposition in the country, and to Mr. H. D. Cutting, the able and efficient Superintendent of that department, is due the credit therefor; and to his untiring energy and industry the bee-keepers are indebted for the very creditable display of last year, which he desires to see surpassed at the coming fair. We have received the following letter from friend Cutting, which speaks for itself:

> I have made arrangements with the International Fair and Exposition, at Detroit, for a very desirable space for the bee and honey exhibit. It is larger than the space occupied last year, and in a much better location for the exhibition of goods of this class.
>
> This is a splendid place to exhibit, and every bee-keeper who can possibly make an exhibit will find it to his advantage to do so; and the expense is small, as compared with that of other exhibitions.
>
> I will be present to allot space, and do all I can to make it pleasant for exhibitors during the fair. All goods consigned to me will be placed on exhibition, and reshipped to owners at the close of the fair.
>
> Persons desiring premium-lists and entry blanks, should write to Geo. M. Savage, No. 7 Merrill Block, Detroit, Mich.
>
> For space and information in regard to the exhibit in the bee and honey department, address the undersigned.
>
> H. D. CUTTING.
>
> Clinton, Mich.

Illinois bee-keepers are being enthused by the generous recognition of the industry by the late Legislative appropriation. A correspondent desires us to insert the following in order to ascertain the views and feelings of others. Is it worth while to meet and confer? That is the question to be considered. He says:

> Now that the State has made an appropriation for printing the report of the Illinois Bee-Keepers' Association, an earnest effort should be made to have a valuable and comprehensive series of essays prepared, relating to our growing industry.
>
> What do the bee-keepers of Illinois think of having a conference held during the Springfield Exposition, Sept. 7 to 11, to arrange a programme for the annual meeting, and to enthuse bee-keepers in reference to the splendid recognition of this industry by the late General Assembly, as well as to take action in reference to the exhibit to be made at the Columbian Exposition?

One-Eyed Bees were mentioned on page 730 by Prof. Cook when describing a sample sent us by Mr. N. Staininger. These cyclopian bees are mentioned by Mr. T. W. Cowan, in his book, "The Honey Bee," on page 167. This is the first time that such have been mentioned in a bee-book, we think. Mr. Cowan says that Major Munn described them in the *Bienenzeitung* in 1886, and adds:

> The Major stated that, if placed in a box, they crawled out, walked on the table, and fell on the floor, but evidently could not see, as they did not fly to the window. Vogel, who examined them microscopically, found the eyes quite transparent, and destitute of pigment. The hairs and simple eyes were also quite white.

Malicious Outrage.—Sometime since we mentioned the fact that G. W. Cole, of Canton, Ills., had been sued for maintaining a nuisance in that city by keeping bees therein. He was fined a dollar, but took an appeal from the decision of the Justice of the Peace to the Circuit Court.

Not content to await the decision of the appelate court, the prosecuting witness, from pure malice, again renews the persecution, and the same Justice of the Peace issues a new warrant to annoy Mr. Cole.

The National Bee-Keepers' Union has the matter in hand, and will endeavor to successfully defend the pursuit, and show the insignificant prosecuting witness that the success of his little "game" is of but short duration. The law, when administered by competent brain and worthy hands, will vindicate Mr. Cole, and the pursuit of bee-keeping in the great State of Illinois.

Mr. S. A. Shuck, of Liverpool, Ills., a member of the Bee-Keepers' Union, and a correspondent of the American Bee Journal, attended the trial, and after returning home, wrote as follows to Mr. Cole about it:

> To any fair minded person it was evident that the grievances were greatly exaggerated in the testimony given by the prosecuting witness; and not only this, but it is also evident that the prosecuting witness, or his wife, purjured themselves as he testified that he helped his wife to wash the clothing over in consequence of the stain from the bees, while his wife testified that the clothes were *never* washed over.
>
> The testimony that the clothes were badly stained nearly every time they were washed, is surely false.
>
> But admitting that the clothes *were* badly stained in a few instances, and allowing that the parties were stung as often as they claimed to have been—five or six times in all—does that, or can it, constitute a nuisance? If so, then what is it that may not become a nuisance by being in the least annoyed.
>
> It appears to me that, if your bees have damaged your neighbor's clothes, or injured them in any way, you should be allowed and required to pay the damages.
>
> But how any court *claiming justice* can fine a man $1, and costs amounting to $25 or $50, and rob him of $100 to $200 worth of property, and that, too, when it has not been shown that the complaining parties have been damaged 25 cents' worth, is something I cannot see through or understand.
>
> I am a member of the Bee-Keepers' Union, and have been ever since its existence, excepting the first year. My advice would be to appeal to the higher court.

◆

Kicking Mules should not be allowed in an apiary. It is criminal carelessness to allow such things to happen as are described in the following telegraphic item in the daily papers:

> Clay City, Ills., June 29.—Richard Emery's mules kicked over a hive of bees belonging to A. J. Price, of this place, to-day. The bees became enraged and stung the mules until they could kick no longer.
>
> The bees then took possession of the public highway between here and Saylor Springs, and caused the team of Henry Pain, living north of here, to run away, severely injuring George Pain, his brother.
>
> Traffic is now stopped on the road at this point, as the bees have taken possession, and the hacks are compelled to go a long distance around to reach here from Saylor Springs. Mrs. Anderson had to have the bees literally raked off of her. Several children were stung to such an extent that they are in a critical condition.

All this was the result of the stupidity of allowing a long-eared team to be anywhere near hives of bees.

◆

We are Sorry to learn that Mr. N. N. Betsinger has been again sentenced to the State's Prison for 4 years and 7 months. A correspondent thus remarks about the matter:

> He will doubtless be granted a new trial. After hearing the second trial it is very clear that he is innocent. He is the victim of quarrelsome neighbors.

◆

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms.

Queries and Replies.

Cleaning Wood-Zinc Honey-Boards.

QUERY 774.—I find that some of my wood-zinc, queen-excluding honey-boards become solidly "stuck up" with wax and propolis. How can I best clean them, and restore free passageways for the bees?—D.

Try putting them into hot water.—M. MAHIN.

I know of no royal way. Careful scraping in cold weather is not hard.—A. J. COOK.

Put them in the solar wax extractor for an hour or two some clear, hot day. —G. M. DOOLITTLE.

Dip them in boiling water, or break a few open, and let the bees open what more they want.—R. L. TAYLOR.

Take what is commonly called a tea-kettle filled with boiling water, pour the water on the zinc strips, and the wax will go at once.—H. D. CUTTING.

I would say, make a tool just the right shape to reach all the "stuck up" parts, and scrape them clean. I am wondering just how they are constructed.—JAMES HEDDON.

I do not know of any way but to scratch and scrape, and keep in mind the scriptural quotation: "In your patience possess ye your souls."—J. M. HAMBAUGH.

I have had no experience, but I think I would try to get them cold enough to make the propolis brittle, and then scrape them with some steel tool.—C. C. MILLER.

I should scrape it off of each side with a wide chisel, and borrow my husband's jack-knife and sit in a rocking chair in the grape arbor and pick it out.—MRS. L. HARRISON.

Either "scrape" or use a little kerosense to dissolve the gum, and then follow with a brush and a little soap suds. The bees will wage but little objection.—J. P. H. BROWN.

Queen-excluders are a nuisance, and we would set them aside if we were in your place. Queens do not go up into the supers oftener than one year in five, and then it is only a few queens that do. —DADANT & SON.

Dip them in boiling water, or set them in a boiler and pour very hot water over them from a tea-kettle. Do not try to clean with a knife, as that would spoil the zinc.—C. H. DIBBERN.

I have never had any trouble of the kind, of any consequence, but I have found no easier way to clean propolis and wax from honey-boards, sections, etc., than to scrape them clean with a smooth-edged knife.—J. E. POND.

I think that as good a way as any for the average bee-keeper is to lay them in the sun until the wax and propolis melts, and then, with a chisel, or some square-cornered instrument, clean them. The chisel ought to be just the width to fit between the slats.—EUGENE SECOR.

The wood-zinc queen-excluder is never badly "stuck up" with wax and propolis, when rightly managed. They are best cleaned, when clogged up, by placing in the sun until the wax is soft, then scrape off with a suitable tool, or a piece of heavy tin, sharpened to a dull edge.—G. L. TINKER.

Your experience with the wood-zinc honey-board is very natural. They are a mechanical exaggeration. Many implements designed for the apiary look "nice" until they are tried practically, and then the want of forethought is apparent enough. The uneven surface of the wood-zinc excluders makes them hard to clean. Cold weather is the best time to scrape off propolis, as it will not stick to the knife and fingers like it does in hot weather. I use the plain sheets of perforated zinc framed with wood. They are easily and rapidly cleaned.—G. W. DEMAREE.

To dip them in boiling water is the best way so far suggested. See what Abel Gresh says about it on page 22 of the BEE JOURNAL for last week.—THE EDITOR.

When Writing a letter be sure to sign it. Too often we get letters with the name of the post-office, but no County or State. One such came recently, and we looked into the Postal Guide and found there were places by that name in 13 States. That order for goods will have to wait until another letter comes to give the proper address. Be sure to stamp your letter, or it may go to the dead letter office.

Topics of Interest.

Something About Honey-Houses.

G. M. DOOLITTLE.

During the last few months I have received several inquiries about building honey-houses, a shop and honey-house combined, place for honey, extracting rooms, etc., in new buildings, and in those already built; and from these many inquiries, I judge that I can do no better at this time than to tell the readers some of my ideas about honey-houses.

In the first place, I would say, that I should not want extracted and comb-honey, and the work necessary for each, all in one room. My experience teaches that it is best to have a room for comb-honey, one for extracted-honey, and a third room large enough to do all the general work for both. Now, any building can be cheaply lined (so as to exclude bees) with half inch stuff, for this general work room, and the storage rooms built on the south side, so as to make them convenient. airy, and sufficiently warm to ripen honey thoroughly.

If I were building a shop I would build it so that I could partition off these two storage rooms, one on the southwest and the other on the southeast corner of the same, having the body of the shop for doing work of all kinds pertaining to the apiary. I should build it two stories high, and use the upper story for storing everything not in use, or liable to be used for some little time. If I did not wish to build a shop, I should use any old building I had, lining and fixing it as in the case first given for a room for general work, for such a room is certainly necessary.

Having given a little outline of what I would have for a general work room, I will next speak of a room for storing comb-honey. This need not be larger than 8x10 feet, for storing all the comb-honey from 100 colonies in the Spring, even should they produce as high as 200 pounds per colony, on an average. Whether built in with the shop, or at the side of another building, this honey room should have a good foundation under it, for if you should happen to get a large yield of honey, it will need considerable strength to support it.

Use good, substantial sills, and place the sleepers very closely together—not further than 8 inches from center to center. Now, do not think this too strong, and place these sleepers further apart, for if you do you will repent when you get from five to ten tons of honey in your room. I would have the room 9 feet high, and if built separate from the shop, I would have a tin roof on it, and paint it a dark color, so as to "draw the sun," but if in a shop, of course no roof will be needed, as the upper floor will take the place of the roof.

For all of this work I would use good hemlock wood, for this holds a nail well, is strong, and does not easily decay. For the floor, I would use 1¼ matched spruce, as this wears smooth, and is easily kept clean; while for the sides I would use common pine ceiling. If all is put together as it should be, you will not be bothered with mice, bees, or anything of the kind, getting in, if you keep the door shut when you are not about. This door is to be on the side next to your general room, of course.

I would have windows in one side and in one end, which are to be opened in warm, dry weather, so as to thoroughly ventilate the room and pile of honey. Over these windows, on the outside, is to be placed wire-cloth, so the windows can be left open at pleasure, without any fear of robber bees. To let the bees out which may chance to come in on the honey as it is taken from the hive, let this wire cloth run 10 inches to a foot above the top of the window, nailing on ⅜ inch strips, so as to keep the wire-cloth out that far from the sides of the building, thus giving space for the bees to crawl up on the cloth to the top when they are on the outside. No robber bees will ever think of trying to get in at this entrance, so your room is kept clean of bees and flies all the while.

This completes the building, except that we want it painted some dark color, so that the rays of the sun may keep it as warm as possible. The door should be in the center of one side, so that on each side of the room a platform can be built, upon which to place honey.

Perhaps all will not agree with me, but I think that all section-honey should be stored in such a room at least a month before crating, to ripen and sweat out. I know it is a saving of time and labor to crate it at once, but I think that it pays for all this extra time and labor in the better quality and appearance of the product.

For the platform, I take pieces of 2x12 plank, and cut them the desired length, spiking two pieces together, thus making them 4x12, using three of these on a side, set on edge. The length of these should be such that you will have an alley from 2 to 2½ feet wide through the center of the room. Upon these lay four 3x4 pieces, as long as your room is wide, using four on each side.

Now, lay 2x2 pieces across these last, their length being the same as the 4x12 were, for your sections to rest upon, and these should set on the sticks the same as they did on the hives, having the ends of the sections meet in the center of these 2x2 sticks. Also, by means of strips, keep the honey out 2 inches from the sides of the building, so that the air can circulate all around the pile of honey, otherwise that next to the sides of the building will sweat so as to become transparent. When piled in this way, the fumes of burning sulphur can penetrate the whole lot, by placing your burning sulphur under the pile.

The room for the extracted-honey, I would build of the same width, and would have it from 14 to 18 feet long, instead of 10, so as to give plenty of room. The reason we have our comb-honey room small is, that we may sulphur our honey in as small a room as possible. It is full as desirable to have this room as dry and warm as the other, for in a dry, airy room our extracted-honey will become thicker and better all the while.

Extracted-honey can be stored in tin lined vats made to suit you, in barrels, kegs, or in tin cans, as preferred. By placing a cloth over these receptacles, the honey ripens nicely in this warm room, even if the combs are not fully sealed when extracted.

With a description of how I store my combs which are used for extracting and other purposes, when they are not in the hives, I will close:

As you are building your honey-room, have the studding on one side set just as far apart as the top-bar of your frame is long; not from center to center of studding, but leave that space between them. Now, nail strips of ⅝ stuff, 2½ feet long by 6 inches wide to these studding, letting them stand out into the room in a horizontal position.

Let the distance between the strips, from top to top, be 1½ inches greater than the depth of your frame, so as to give you sufficient room to manipulate the frames handily. Three inches from the ends of these strips run a partition clear across the room, which is to have close-fitting, narrow doors placed in it, spaced so as to be most convenient. Now, hang in your combs; see that all combs not in use are in their place, and not lying about somewhere else.

As often as any signs of worms are found, put in a pot of burning sulphur, close the doors, and the work is done. In all this work with burning sulphur, be certain that nothing can by any means take fire from it, before you place the fire on the sulphur, for a room full of sulphur fumes is a bad place in which to put out a fire.

Borodino, N. Y.

A Parody on the Prodigal Son.

M. A. KELLEY.

A certain bee-keeper had two sons; and the younger of them said to his father, "Pa, give me the portion of bees that falleth to me."

And he divided unto them his apiary. And the bees were in log gums, or gum logs, as was the manner of that country.

And in the morning, ere it was yet day, the young man, being a bright lad with much snap in him, had the bee-gums tied up in coffee sacks, and on a boat, floating them down toward the great Father of Waters.

He made his dwelling place over against Paducah, in the land of Daniel Boone and corn whisky. Here, being a good boy, he spent nothing in riotous living, but kept both eyes upon his apiary.

He read the AMERICAN BEE JOURNAL, and all the books he could get, so that his wisdom waxed great, and astonished the natives. For the people that dwelt in that land round-about wist naught of bees, nor whether they were governed by a King, a Queen, or a Jack.

So the boy gat unto himself much gain, for honey sold well in that city. And he found favor in the eyes of the young maidens of the land, and, betimes, took one of them unto him for a wife.

So his apiary and his family grew and multiplied greatly, and he became one of the citizens of the country, and voted, and ran for office, as was the custom of the people.

In the course of time, it came to pass that the people of all the States round-about rose up in war, one against the other. And they came together in battle array with their guns, and their swords, and their bows of ribbon, and their arrows of sarcasm, and their gin slings, and their corn whisky, and all manner of other deadly weapons.

And in the "onpleasantness" the young man's paternal home was wiped out, the elder brother killed, and the father made a "refugee."

So, in his want, the old man said, "I will seek my son, and I will say unto him, 'Son, thou knowest that if it was to do over again, I would do a better part by thee; so, go to now, give me a place in thy home that I may dwell there.'" And he arose and came to his son.

But the son saw him at the gate, and set the dog upon him, for he thought he was a tramp, there being many of that sort in those days. But when he wist that it was his father, he ran to him and took him in his arms.

So he took him in and cared for him all his days, and the old man did naught but light the smoker in bee-time, and nurse his grand-children.

So his last days were the best, and he slept, and was buried over against Paducah, in the land aforesaid.

And the young man prospered greatly, for he was good, and remembered the counsels of his father, and did well to all his fellows.

So shall it be to all young bee-keepers if they take heed to the right way to walk therein. And the Lord will bless them, and make His face to shine upon them. Selah!

Milton, W. Va.

California Bee and Honey Chat.

S. L. WATKINS.

Bees have done remarkably well so far this season. The honey obtained has been lighter in color, and better in quality than is generally gathered at this season of the year; this is no doubt owing to the moderately cool weather we had in the Spring.

All bloom has been considerably later than usual, and, as a natural consequence, bees have had more of a chance to work on it.

It is too early yet to give any definite answer as to what sort of a crop we shall have; but all indications are exceedingly favorable for a large crop, especially in this part of California. Early in the season the manzanitas furnished quite an amount of nectar, and all colonies built up rapidly, and several entered the surplus boxes.

The fruit bloom was also very heavy; but as we had a rain storm for a week in the height of the fruit bloom, the bees did not gather as much as usual from this source. In certain seasons the apple tree is a great yielder of honey; but the honey is not extra light in color, although it makes it up in flavor, as it retains that exquisite apple bloom aroma. Apple honey, after once tried, I do not think will go begging for a market.

At present, bees are working on Californian lilac, white clover, locust, and numerous wild flowers.

I noticed early in the season that the bees worked well on the bloom of the black oaks in our vicinity; but whether they obtained much honey from this source, I am unable to state.

Our swarming season is about over here, and bees have settled down to business in the surplus boxes.

One day here, after a continued rain storm, five first swarms came out, and all settled together, making a mass of bees as large as a good-sized barrel. I divided them up into equal swarms, as near as possible, and hived them, giving each swarm a frame of unsealed brood. They all stayed in until the next forenoon, when they all swarmed out and united again. I tiered three ordinary hives up, and placed them in it, and left them alone. A few days ago I examined them and found that they had all available space filled with brood, bees, honey and comb. Such immense colonies as this work very well for a time, but in a few months they will dwindle down to the size of an ordinary colony.

Unsealed brood will not always hold a colony in a hive; of this I have had abundant proof. I have even known young swarms to stay until they had the hive two-thirds filled with comb and honey, and then leave, every solitary bee in the hive going off.

Some persons may perhaps exclaim: "Well, your hives were not properly ventilated and shaded, and that accounts for it."

Yes, my hives are well shaded, and sufficient ventilation is given, but when a colony becomes dissatisfied, it is almost impossible to make them stay, unless you cage the queen, and then, perchance, three-fourths of the bees will leave and go to the parent colony.

It does not do to leave bees hang out very long after swarming in a location like mine, as hollow trees and other available homes are too abundant. The sooner they are hived the better, and after you have most of them in, they should be moved quite a distance from where they clustered, because the scouts that have gone abroad to seek a home, would soon return and lead them away

It frequently happens in a large

apiary that strange swarms will come there. This is, no doubt, owing to the leaders of the swarm getting on, or crossing one of the "lines of flight" of a large apiary, and coming home with the returning bees.

After an extended trial, I am completely satisfied that a cross between an Italian and Carniolan race of bees is the best. Of course, I find them a trifle more irritable than either race in their purity, but still this is of little moment compared with their other good qualities.

Come with me now and we will open a colony of my favorite bees. We raise the hive cover gently, blow a few puffs of smoke in over the sections. What beautiful, snowy-white combs, you exclaim; and the honey, how evenly and whitely it is capped; what an evenness characterizes all their work, and what beautiful bees!

They all show more or less yellow bands, and several extremely broad bands of white. How fixed and naturally they hang to the combs when examining them!

Note the abundance of brood, the immense number of bees, and the cleanliness of their hive inside. Ah! here is the queen—a large, reddish-gold bee with bright, silvery-colored wings. She does not seem in the least bit disconcerted or excited by the opening of the hive, and the handling of the frames. You see the bees continue to work even while we handle the sections and frames. Now we arrange everything in proper order again; the hive is closed up—not a single sting, and not a solitary bee killed.

You ask why not rear queens from such choice stock, and have them all alike. Well, the fact is, I do try to, but it is an utter impossibility to make queens duplicate themselves. Possibly you will get two out of ten queens that will somewhat equal the mother. Hybrid queens, generally speaking, are larger than the full-blooded bees, and are more prolific.

Some apiarists speak of queens being too prolific, but I have yet to find the first one that I thought was too prolific—the more prolific a queen is, the more bees there are; and the more bees there are in a hive, the more honey will be stored.

The practice of clipping the queen's wing, I do not believe in. I am aware that I am stepping on some apiarists' toes by making such an assertion, but if they can prove to me that I am wrong, well and good; I hould be pleased to receive their proof

Now, a few facts in regard to clipping queens' wings: In an apiary where this method is practiced, there is always quite a loss of queens, and especially so, if the hives are close together and elevated from the ground some distance. If the hives set close to the ground, possibly they will return to their own hive again. If you are not on hand to watch all swarms, there is a great danger of their entering the wrong hive and getting killed.

Sometimes after the bees have made frequent attempts to swarm, and are unsuccessful, they will kill their queen with a clipped wing, and rear another in her stead, so that the swarming fever can be gratified.

If the ground around an apiary is infected with ants, it is an exceedingly dangerous practice to clip queens' wings. If you are constantly on hand, all right; if not, you stand very favorable chances of losing a queen. All things considered, I think that there are more disadvantages than advantages in clipping the queen's wing.—*Pacific Rural Press.*

Grizzly Flats, Calif.

Management of Bees in the Spring.

I. L. SCOFIELD.

We have chosen for our subject, spring management of bees, and how to produce a crop of honey for the market. In working for comb-honey, we must have plenty of bees in the hive when the honey season arrives, or a failure is almost certain, as those reared when the season is drawing to a close, will be consumers instead of producers.

But how shall we secure the bees? is frequently asked. The best way that we know of, after years of trial of nearly all the plans which have been recommended, is the following: When pollen becomes plenty, say, May 5 to 10, in this locality, we go to each hive, and if the bees will bear spreading a little more, or, in other words, if there appears to be more bees than are needed to cover the brood they already have on a cool morning, we take a frame of honey from the outside of the cluster and break the cappings by passing a knife flatwise over the comb, and place the comb in the center of the brood-nest.

In ten or twelve days we go over them again in the same way, always seeing that they have all the honey and bees that are needed to increase the brood to the greatest possible extent, and so we keep on doing until settled warm weather comes in June, when we go over them every four or five days, putting one frame in the center each time. If we find that the queen will fill this frame every four or five days, besides keeping all the empty cells filled, which are daily vacated by maturing broods, we stop.

By June 15 every available cell should be filled with brood, and the hive full of bees, if we are to expect the best results from our field. By this time white clover is out in full bloom, and all the honey boxes should be on. A noted bee-keeper once remarked: "Set the bees out, and they will get the honey if there is any to be had." A more truthful sentence was never uttered. "Keep an eye to business, and do things at the right time if you wish success."

If we wait about putting on the honey boxes when our bees have arrived at the condition we have supposed them to be in on June 15, as many do, thinking that the putting on of the honey boxes retards swarming, and there should be but a few days of honey yield, we would get nothing. A day lost in the honey-flow cannot be recovered. It is no unusual thing to secure from six to ten pounds of comb-honey from a colony per day, if the flow of honey is good, the weather right, and the hive is full of brood and bees, as I have said before.

Now, we will suppose that instead of working, as given above, we will let our bees take care of themselves, leaving weak colonies unprotected, and if any bees have died during the Winter, we leave their stores for the other bees to carry away. After carrying off this, they will be apt to rob our weak colonies, and thus those which survive will have their combs full of honey instead of brood.

Too much stores in May and early June will just as surely spoil a colony for comb-honey, as it will keep their brood in check all the Spring. There is no such thing as having the combs full of honey during the forepart of the season, and then having boxes filled with clover honey, for where would the bees come from to gather the honey?

We must never allow the bees to get in advance of the queen, for if we do the prosperity of the colony is checked at once. Honey cannot be obtained without bees. The ten Langstroth frames which we use in a hive during June give from 45,000 to 50,000 working bees every 21 days, and a queen that is good for anything, worked on the plan given in this article, will keep the frames filled with brood, after they are once full, until the honey season begins to draw to a close, provided the honey boxes are put on at the proper time.

If a hive contains 5,000 bees on April 10, with ten pounds of honey, they are what we call a good colony. With a young and prolific queen, managed on the above plan, if the season is right so there is honey in the flowers, we can expect a crop of comb-honey. Thus, it will be seen, it is bees we want in our hives the forepart of the season, not honey.

If, by the process given, our bees should run short of honey, of course we must feed them, and money thus spent in feeding will return a large interest, if the season is anything like favorable. Honey is the best thing we know of to feed.

We often hear it said, if the bees cannot get a living after the first flowers come, they can die. No greater folly could possibly exist.—*Read at Farmers' Institute.*

Whitney's Point, N. Y.

Introducing the Punic Queen-Bees.

E. L. PRATT.

Some have the idea that the Punic bees are the same as Minorcans or the Malta bees, but they are not. The above are varieties of *Apis Niger*, but not Punic. This specie is spread all over Northern Africa, from Egypt to the Atlantic, and are met with in various other places, including Spain, more or less interbred with the *Apis Melifica* and *Apis Ligustica*, All the yellow banded races are *Apis Ligustica*—even Syrians, Cyprians, and yellow Italians. Black Italians belong to *Apis Niger*; hence, one will see that the Punic bees are a variety of *Apis Niger*, and if any other is obtained for them, people are likely to be disappointed.

If virgin queens of the Punic variety mate with any of the high grades of drones, a splendid mother bee will be the result, and by allowing only the drones from this queen to fly another season, other virgin Punic queens can be mated, and they will be pure. Thus, at a small cost, pure stock can be obtained.

The directions for the safe introduction of these queen-bees are very simple, and are as follows:

Take three or more combs, with some honey in them, but no unsealed brood or eggs, and put them into a hive, then shake onto these combs the bees from off two combs at least, from a good, strong colony, taking care that the old queen is not among them. Now, remove this strong colony to a new stand, and place the new one in its stead, so as to catch most of the flying bees.

Do not use any of the combs from the strong colony, for fear of getting one with an egg or two in it. Combs containing brood that have been above an excluding honey-board at least eight or ten days can be used, but it is safer to have no brood until the queen has been introduced two or three days.

In 48 hours drop the virgin queen between the combs among the bees after dark, alone; and on no account must she be caged, scented or daubed with honey.

Do not give them unsealed brood or eggs until after the queen has been laying a few days, or she will be almost certainly "balled" at the entrance on returning from the bridal trip.

All the appliances used in previous bee-keeping with any race can be used with the Punic bees.

Beverly, Mass.

Doolittle's Method of Queen-Rearing.

J. P. MOORE.

It affords me the greatest of pleasure to say that Doolittle's method of queen-rearing is a grand succes; it is far ahead of any other method I have ever tried. By using 10 colonies for cell building, I can start a lot of cells every day, and still have them storing honey just the same as if they were not building cells. This sounds almost too good to be true; and a few years ago we could not have believed it. Every bee-keeper in the land owes him a vote of thanks for giving to the world such great value as is contained in his book. I have also tried his method of forming nuclei and introducing virgin queens, as given in Chapter XI, and it has proved a success, also. In fact, it seems that all of Doolittle's methods are successful. I have been using his queen-cell protectors ever since they first came out, and do not see how I could get along without them now. I could not help smiling when reading the forepart of Chapter X, telling how he felt about losing those queen-cells, his feelings were so much like my own before I commenced using his cell protector. Now, I can put a lot of queen-cells in the cell protectors; place them in nuclei, and two days after go and find every queen hatched out and running around. By the old method I would sometimes find half of them torn down. The chapter on the subject of Securing Good Drones contains many valuable suggestions, which every queen-breeder ought to put in practice, if we expect to make great progress in improving our bees. I have a colony queenless now, into which I have been placing frames of select drone-brood, in order to have plenty of select drones flying after the honey season is over.

Morgan, Ky.

Honey-Boards vs. "Queen-Excluders."

JAMES HEDDON.

Dr. Tinker, whether he is aware of it or not, is only misleading beginners by his copious writings upon subjects relating to that part of apiculture with which he has but little experience.

About a dozen years ago I invented a honey-board combining two distinct features, which proved of great value, viz.: The bee-space and break-joint features.

Later, when Mr. Jones came forward with the queen-excluding metal, the Doctor and three other bee-keepers, each without any knowledge of the work of the others, combined this metal with my slat honey-board, and this the Doctor calls his wood-zinc queen-excluder, wholly omitting the term "honey-board," which its inventor gave to it.

When my new divisible brood-chamber hive came out, the Doctor wrote to a friend that he must have the use of some of the new "Heddon principles."

He obtained my permission to use a part of the features of the new hive for one year, and at the end of that time, and after Mr. Dadant had written that he thought that, in years gone by, the Scotch had attempted to carry out some of the functions of my invention, by the use of what they called "storifying hives," the Doctor made a hive infringing that feature of mine, viz.: the divisible brood-chamber, and uses no other word but "storifying" in discribing the advantages he wrote about.

Suppose that twelve years ago I had patented my honey-board, the principal claims of which patent would have been the break-joint and bee-space, or half bee-space (of all of which every well-posted bee-keeper knows that I am the inventor), how could the Doctor make his "wood-zinc queen-excluder?"

Another thing. Every all-metal honey-board, or "queen-excluder," would have to be stiffened with a rim (whether of metal or wood), which did not at the same time create a usable bee-space in that honey-board. I was the first, so far as I know, to rim the all-metal honey-board, and thus not only stiffen them, but at the same time give them the bee-space.

While it is true that the ½-inch bee-space the Doctor creates over so much greater surface by the use of such wide zinc strips (a horizontal surface), top-bars spaced ⅜ or ½ inch apart, will not have as many brace-combs between them as those spaced closer together, this space is vertical, not horizontal.

Every old-time bee-keeper who began using Father Langstroth's 1⅛ inch top-bars, knows that the vertical space between their edges (not between their tops and his old honey-board, or any cover or surplus receptacle) was forever terribly plugged with brace or burr-combs.

Experienced honey producers have demonstrated that two rows of holes, the length of the standard honey-boards, will give ample passageway for the strongest colony of bees, and that the difference between 8 rows and 16 rows is radically against the 16 rows which the Doctor pleads for.

So far as business interests are concerned, all are at liberty to make either or both, but the facts as to value remain the same.

Dowagiac, Mich.

Fixed or Hanging Frames.

C. W. DAYTON.

Since my article on this subject, published on page 790, is not very complete, I will explain a little further:

If I wished to space my frames an exact distance apart, it is not necessary to change the whole frame, and perhaps the hive, but cut out and solder together a piece of zinc about ⅝ of an inch wide, so as to be worn on the fourth finger, like a band finger-ring. Then solder upon this crosswise of the finger, in the direction of the ring, a projection of zinc about ¾ of an inch long, and as wide as the distance required between the frames.

When the ring is worn, the projecting piece of metal should be on the under side of the finger, where it will be ready to drop edgewise between the frames as they are moved together. One of these rings is necessary for each hand, and a tinner will furnish them for ten cents. The main points of advantage in this spacer are, cheapness, it is out of the way when extracting, and has short lines of contact where bees may be killed.

To claim that closed-end frames, or partly closed-end frames, can be spaced or handled quickly, is simply bosh. Even with the rabbets, bees are crushed on the sharp edge under the projecting arm, that is ⅞ of an inch wide, while the closed-end frames are wide edged, and several inches long, and the crushing tendency identical.

A row of open-topped sections, such as are used in the T super, have the closed ends, the same as closed-end brood-frames, and they are always glued together solid in the short space of time the sections are on the hives.

Again, the bees glue the frames together the whole length of the end-bars, making it next to impossible to get the frames apart (unless they are "handled only in warm weather," when the glue is soft) without putting the bees in a rage by the snapping of the cold glue, and the jarring of the combs.

At first, I used the simple wood rabbet, but the bees glued them so I put in tin rabbets, and I have now got back to the wood rabbets for hanging frames, which renders the frames stationary enough to be carried about the apiary, or hauled, over ordinary country roads, from 5 to 10 miles, without any displacement of combs.

We want the frames for manipulation, and not for hauling upon wagons, and there may be two extremes in this particular as widely separated as the metal rabbet and the 18 inches of cold glue on the closed-end frame.

From Mr. Freeborn's experience, given in the BEE JOURNAL a short time ago, I would judge that this extensive hauling of bees to distant out-apiaries, will gradually become less.

One advocate of closed-end frames gave as his objection to hanging frames, that "bees were rolled and crushed between the lower part of the end-bars of the frames and the hive as the frames were being lifted out."

The first thing the beginner should fix in his mind is, that a bee-space is about ⅜ of an inch—more than ¼, and less than ½ an inch. Three-eighths is the space to allow between the end-bars of the hanging frames, and the inside wall of the hive.

When the brood-frames are made, drive a dull nail through from the inside and near the lower corners of the end-bars, so as to project exactly ¼ of an inch, and it will obviate the killing of a single bee, however rapidly the frames may be handled.

This projecting nail point is as important as the projecting arm the frames are suspended by. Without it the end-bars of the frames may come so close to the side of the hive that the bees cannot pass between them, and they will then deposit a wall of glue along each side of the frame, leaving a space between these walls and behind the end-bars where moths are reared by the hundred. I lately saw 5 hives where the moths destroyed the colonies in this way.

Again, I removed the colonies from several hives where the frames were so deep that the inch wide bottom-bars were so near the bottom-boards that moths existed in surprising numbers, under them. Sometimes there were holes through the solid wood of the bottom-bar, where the moths escaped into the combs. At other times the top-bars were too thick, or the rabbets so shallow that it made the space between the top-bars of the frames and the cover-board about ⅛ of an inch deep. As the board was seldom removed, this furnished an excellent nursery for the moth.

In some frame hive apiaries the flying moths were busy around the hive, in the evening, watching an opportunity to deposit their eggs inside the hive; and in the morning the alighting-boards were strewn with dead larvæ of the moths, which the bees had killed, and also with young brood the moth larvæ had rendered imperfect in their depredations upon the combs. In box-hive apiaries, I could find no such conditions, so that it proved that a poorly constructed frame hive is a veritable moth trap.

The manufacturers of these hives and frames had in mind a very imperfect idea of the movable frame, which was that the spaces need be only wide enough to allow of manipulation, when, in fact, the spaces must be wide enough for two bees to pass along, back to back; and this requisition *must* be heeded, regardless of plans which the ignorant manipulators may make, as the bees emphasize their rules by piling on glue until the frames become immovable.

These observations have not been confined to a single apiary, but to a dozen or more, aggregating about 500 hives.

Since examining apiaries in several counties, and not finding a trace of foul-brood, I am of the opinion that much, if not all, of the foul-brood scare in Wisconsin is occasioned by the ravages of the moth, through neglect or poorly constructed hives.

Clinton, Wis.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.

July 30.—Carolina, at Charlotte, N. C.
A. L. Beach, Sec., Pineville, N. C.

Aug. 6.—Rock River, at Sterling, Ills.
J. M. Burtch, Sec., Morrison, Ills.

Sept. 3.—Susquehanna County, at So. Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—P. H. Elwood....Starkville, N. Y.
SECRETARY—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

Bee and Honey Gossip.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Plenty of Clover, but No Nectar.

Owing to the very poor season last year, many bees died in this vicinity, the mortality being greatest in the latter part of April and early part of May, before the apple bloom, upon which the bees seemed to do well while it lasted; the weather was then very dry, and white clover, while plentiful, seemed to secrete no nectar, and I have seen very few bees at work upon it. I do not understand why the white clover does not secrete nectar, as in former years, and would be inclined to think it was owing to the drouth, but for the fact that it was about the same last year, when it rained half of the time. Last Fall I put 48 colonies into Winter

quarters, and lost 8 colonies by starvation. Up to date 12 swarms have issued. May 31 I hived a swarm and hung the hive on the scales, the bees weighing 3½ pounds; June 7, they had gained 5 pounds; June 15, they had gained 8 pounds more, being a gain of 13 pounds in 15 days. We had a copious rain last night, which was badly needed. R. B. WHEATON.
Middlebury, Conn., June 19, 1891.

Honey from Smart-Weed.

Bees are doing fairly well here. From some cause, white clover does not yield honey here like it does in other sections. Our main crop is from basswood. Usually we get a good flow of Fall honey, mainly from smart-weed. It is very wet here now, and we anticipate a good Fall flow of honey. E. W. PITZER.
Glenwood, Iowa, June 26, 1891.

Useless Drones.

My bees are doing finely, but one colony has cast two large swarms, and I noticed that they were not doing much in the sections. On examination, I found that the hive was full of drones, and had few worker-bees. What shall I do with the drones? T. C. BREECE.
West Berlin, O., June 19, 1891.

[Unite the bees with another colony having a good laying queen. The drones are useless, and should be promptly destroyed.—ED.]

Fine Honey-Flow.

We have had the finest honey-flow so far this season that has been known for several years; the weather has been favorable, and the bees worked with a vim. I had one colony in my apiary that gave me 160 pounds of surplus honey, but the average was about 40 pounds, Spring count. My bees were not in good condition when the honey-flow commenced. They had run short of stores, which was something unusual; but last Fall there was so much rain that they could not build up sufficiently to carry them through the Winter, and I had to feed some colonies, and some died from starvation. I think there are too many bees in my neighborhood for them to do well—there are 500 colonies within 1½ miles of my place.
L. B. TOLAR.
Kerrville, Tenn., June 27, 1891.

Honey Plants for Marsh Land.

What kind of honey plant would be best to plant or sow on reclaimed marsh land? Also, what is the best time to plant? J. W. MATHENY.
Argos, Ind.

[Either pleurisy root or sweet clover would do well on marshy soil. The honey from these plants will compare favorably with white clover, and they bloom profusely, and it lasts long. The seed of pleurisy root may be sown like cabbage seed. Sweet clover may be sown in the Fall and transplanted in the Spring to 2 feet apart; or it can be sown in any way, for it will grow anywhere except on a bare, flat rock.—ED.]

Too Much Honey-Dew.

For over three weeks the bees have been working on the oak trees, the leaves of which are covered with so-called honey-dew or "bug-juice," as per sample sent you to-day. I had intended to work for extracted-honey, but as the combs are full of this "bug-juice," which I will not offer for sale, I shall work for comb-honey, provided the bees ever stop storing honey-dew. Some of my hives are three stories high, with 30 Langstroth frames filled with brood, honey, and honey-dew. I have 36 colonies of bees, but cannot find any honey that is fit to eat, although some colonies have over 75 pounds in the combs. It is capped, and *looks* very nice.
E. CALVERT.
Des Moines, Iowa, June 22, 1891.

Heavy Crop of Honey.

The bees are just booming, and honey from white clover, blue thistle and sumac is coming in rapidly. The prospects are very favorable for a heavy crop of good honey. J. W. CARTER.
Pleasant Dale, W. Va., June 26, 1891.

Too Much Rain in Kansas.

In the Spring my pa gave me a colony of bees, which was very weak. The honey-flow was good from fruit bloom, but after that the weather was very dry for about three weeks. My pa has a colony of Italian bees that has cast three swarms. The first swarm took wing and were lost; the second swarm issued and settled on the hedge fence. The next morning, pa opened the hive of the parent colony and cut out five queen-cells, to keep them from swarming, but in the afternoon another swarm issued, being the third swarm, and 9 queens from the same colony. There is a good honey-flow now, and the bees are storing honey very fast, some colonies having the sections nearly full. Pa has 16 colonies of Italians, and 25 colonies of black bees. The people in this vicinity do not give their bees much attention, keeping them in boxes and nail kegs. The season is very late, and we are having a great deal of rain.

EMERY W. WAYMAN.

Chanute, Kans., June 20, 1891.

Cutting Bee-Trees.

Is there any law against cutting a bee-tree not on your own land; if so, what is it? WISCONSIN.

[Certainly. Common law, the substructure of all law, forbids any one to cut trees on the land belonging to another. The way to do it, is to see the owner, and get his consent. You have no more right to cut trees belonging to another than to cut his wheat.—ED.]

Eggs Lying Dormant.

In answer to Lone Star, on page 805, I wish to state that eggs sometimes lie dormant from 2 to 4 days before hatching, and our friend may be a little mistaken in the exact age of the larvæ. This may account for the absence of the queen, as our friend does not say that there were eggs at the time the examination was made. I never knew a fertile worker to lay short of 8 to 10 days' preparation, and the eggs do not hatch readily. J. W. BITTENBENDER.

Knoxville, Iowa.

More "Bug-Juice."

The season in this locality has, thus far, proved quite favorable for honey gathering, as we have an abundant crop of white clover, and the field workers are doing splendidly. We have had very copious rains of late, and, of course, the outlook is quite favorable. Some of our bee-keepers complain of dark honey—honey-dew, or "bug-juice," as some call it. Very few swarms have been cast up to date. R. T. DAVIS.

Decatur, Ills., June 26, 1891.

White Clover a Failure.

White clover is a failure in this vicinity, so far as the honey crop is concerned, and we are flooded with honey-dew. Basswood is blooming profusely, but the nights are too cool, and the prospects are now good for only about one-third of a crop of honey. Bees have swarmed excessively here, especially those kept by novices. Up to date the season has been very wet.

J. G. GRAHAM.

Agency, Mo., July 1, 1891.

Crop Report.

I have taken over 4,000 pounds of honey from 65 colonies of bees since March 12, and there is about 1,000 pounds more ready to be taken, 900 pounds is comb-honey, in large frames, which sells readily here at 10 cents per pound. I am selling extracted-honey at 6 cents per pound.

P. W. McFATRIDGE.

Ontario, Calif., June 9, 1891.

Good Results.

My bees are doing well, and are storing large quantities of honey, of the very best quality. L. MABRY.

Aurora, Tex., June 26, 1891.

Ready for the Harvest.

Bees are storing honey fairly well, but are not swarming much, and I expect a good crop of honey this season. White clover is abundant, and basswood is well covered with buds, giving promise of a good yield of nectar. My colonies are all strong, and in good condition for the harvest. A. Y. BALDWIN.

De Kalb, Ills., June 27, 1891.

More Prolific than the Punic Bees.

The Wonderful Punic Bees are left in the shade, by actual count, in the number of swarms. I have a colony of black bees, with a light strain of the "Yellow Jacket," in a 12-frame Langstroth hive, which cast a swarm on Friday, June 4, and kept swarming until June 15, and during that time 12 swarms issued from this hive, and I expect at least one more swarm from them this week, and at that rate they would swarm about 28 times a month, or 84 swarms in 3 months. I call them the Minnesota Hustlers. I never saw as much white clover as there is this year, but the bees do not swarm as early as they did last season, although the hives are full of bees and honey. Very late last Fall, I bought 5 colonies of Italians, and two of the 8-frame hives had only about half the length of the frames filled with comb, and but very little honey. I fed to these 5 colonies $6 worth of granulated sugar, and they came through the Winter in fine condition, wintering better than my heavy colonies, with no loss of bees, and one of them cast a swarm yesterday. I winter my bees in my cellar.

MARK D. JUDKINS.

Osakis, Minn., June 15, 1891.

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Black, Shiny Bees.

The black, shiny bees referred to on page 805 by G. B. Replogle, seem to come from colonies that have been robbed, and are stray bees. They may come from distant yards, but most of the time from colonies in the same yard, and seem to gain admittance more for pity's sake than for anything else. They appear to be contented with just enough room to loaf in, and small rations. I have never found them among the brood-combs, but they are found on the entrance and bottom-board. They never pack pollen, and seldom honey, and are continually tormented by the bees, and if they show fight or flight, they are balled by from 3 to 6 bees and killed. They are not diseased bees, and will generally disappear in July, according to my observation.

J. W. BITTENBENDER.

Knoxville, Iowa.

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New Use for Bee-Stings.

Our learned men are not the ones who make all the discoveries. In conversation, a few days ago, with a man who has 4 colonies of bees, and whom we will call Mr. A, the writer had the pleasure of getting some information in regard to the uses of the bee-sting (I have had some practical experience in that line before). Mr. A said that Mr. B told him that the bees, after sealing up their honey nicely, went over all the cells and perforated the capping, leaving a small portion of poison in each cell to preserve the honey. When asked where he learned this, he said, "Miss Somebody" (who, by the way, is a maiden lady of uncertain age, and who probably never saw the inside of a bee-hive in her life) had told him. We are having an abundance of white clover now, but the weather is too wet for the bees to work. I had one swarm to issue on May 18; have been trying to keep them from swarming. I have 31 colonies, all good but 3, and they are filling in the sections when the weather permits.

T. C. KELLY.

Slippery Rock, Pa., June 22, 1891.

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Bees on the Point of Starvation.

I made a thorough examination of my apiary on June 1, at which time the bees did not have, on an average, exceeding one pound of honey per colony, many colonies not having a single cell of honey. During the first week in June I fed all of my bees, and many colonies destroyed their brood, there being nothing in bloom, and only the honey-dew kept them alive, it being most notable on the box-elder. For several days we had a great deal of rain, but the weather has cleared up, and work has commenced on the white clover. No swarms have issued yet, and I have no use for crates. I have 80 colonies in my home apiary, and a few in the country that are doing a little better.

O. R. GOODNO.

Carson City, Mich., June 22, 1891.

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Bee-Culture in State Institutions.

In compliance with a request published on page 805 of the BEE JOURNAL, I will answer the questions there asked, regarding instructions in bee-culture, as follows:

1. I think in Rhode Island—this is mainly an experiment station, I believe—New York, at Cornell; Colorado and Michigan. Michigan alone has done this heretofore. She has taught large classes for 24 years.

2. Yes, Michigan has a full course, and gives any student an opportunity for further study and work in the apiary.

3. Not any when for apiculture, specially, nor yet in horticulture, agriculture, or veterinary. The students study all, and get a diploma for full course. Then, if desired, any student may take a second degree on work done in apiculture. We had a student do this a year ago. He had come from Japan purposely to study bee-keeping.—A. J. COOK.

Returning Swarm—Hybrid Queen.

A swarm of bees issued June 9, and was put in a frame hive, where they staid for about two hours; then they left, and the owner followed them for about half a mile, but could not keep up with them, so gave up the chase and ownership of the bees, but to his great surprise in about three hours they came back, and went into the original box-hive. Either they had no queen, or were sick of the job they had undertaken. I have one colony of bees that has three kinds of bees in it. I purchased it last Spring, in a box-hive, and have transferred it to frame hive. Now I find black bees, and bees with two, and some with three yellow bands, and all seem to be hatched from the same queen. Can you explain?

J. B. Ramage.

Blaine, Wash., June 12, 1891.

[The queen was impurely mated, and, therefore, her progeny are hybrids, variously marked.—Ed.]

Basswood the Only Hope.

The outlook for the "big honey crop" is not very encouraging. We have had ten days, perhaps, since June 1, in which bees have stored some surplus; now they are just making a living. We have not far to look for the cause. No rain to speak of fell here from the time the snow disappeared in the Spring until June 22, and, of course, that was too late to be of any help to white clover. Unless basswood yields nectar abundantly—which is doubtful in this locality—there will not be any honey to sell in this county. From my 100 colonies two swarms have issued.

H. J. Rogers.

Stanard's Corners, N. Y., June 29.

Last Season's Honey Yield.

My bees did fairly well last season, although it was a very poor season for honey in this locality. They averaged about 75 pounds of surplus honey per colony, Spring count, besides one prime swarm from each colony.

Aristotle, N. Y. H. C. Farnum.

"Blood will Tell."—This applies to strains of bees as well as to families of human beings, and they differ as greatly in characteristics.

Wavelets of News.

Honey Crop.

We predict a good honey crop this season for those who have their dish right side up at the proper time, as we have had abundant rains to keep the clover in bloom, and basswood promises well here. We should take good care of the bees, then if we fail it will not be our fault.—*Minnesota Farm.*

Catching Queens.

About noon on Decoration Day, when I was very busy, I saw a swarm issuing. I went to the front of the hive and soon caught the queen and caged her in a little cage—which is merely a rim of tin with a wire gauze top. I moved the hive and put in its place one filled with empty comb, and placed the caged queen in front. In a few moments the bees came pouring into it hunting for mother, and when they had all returned, the queen was released, and the swarm carried to its permanent stand. I have been quite fortunate in catching the queens of the few swarms that have issued thus far. The little cage that I speak of is very handy to have in the apiary. One day I caught a queen, and placing a cage over her, left her for a moment upon the white cover of a hive in the hot sun. I only took a few steps, but when I returned she was dead—sun struck, I suppose—and I do not leave queens caged in the sun any more. These little cages are handy to use as cell protectors, as they can be pressed into the comb, and when the young queen emerges the bees can feed her through the meshes.—Mrs. L. Harrison, in *Prairie Farmer.*

Swarmed to Death.

This is the verdict usually given, where bees have swarmed until there is barely a corporal's guard left in the old hive. Where bees have been allowed to swarm *ad libitum*, many such hives will be found at the close of the swarming season, and moths will get the credit of destroying them.

I was very sick one year during the swarming season, and the family hived everything in the shape of a swarm upon empty combs, as the preceding Winter had been very fatal to bees.

I found the hives from which the bees had swarmed to death, solid with honey and bee-bread, and about a pint of bees, with a laying queen. The combs were taken out, and the little colony confined upon two combs in one side of the hive with a division-board.

The combs I removed had the honey extracted, and then from a populous colony I removed a comb of chipping brood, brushing off the bees, and, removing the division-board one notch, put it in with the little colony. One of the combs from which the honey had been extracted was given in exchange.

When the bees were out of the comb, I gave them another until the hive was full. It was a benefit to the populous colonies also, as it gave room for the queen to lay.

The "casts" which had been hived upon empty combs and had no honey in them, were exchanged with populous colonies for those containing brood, and a couple of combs containing honey was given them. In a short time every hive was running over with bees.

There was no white clover honey that year, and we had despaired of getting any sort, when in August the Fall flow commenced, and, as our dishes were right side up to catch the shower, a large amount of surplus was secured.—*O. J. Farmer.*

Bees Stings.

The sting of the bee is so peculiarly constructed that if you pull it out, instead of relieving the pain, it adds greatly to it, for instead of pulling out the poison, you push it into the flesh. Scrape the sting out immediately with a knife, and you scrape the poison also.—*Exchange.*

Smoker Fuel.

After trying many different kinds of fuel, for a bee-smoker, I find corn-cobs, cut fine, the best to use, when taking away surplus. For all other purposes I like buckwheat chaff the best. A tin strainer is needed when chaff is used, to keep the chaff from blowing out. The only objection to using chaff when taking off surplus, is in soiling the honey. Possibly a fine strainer would prevent this. The coarser part of the chaff is best. It is surprising to see how well chaff holds fire, and the length of time it will burn. I left my smoker in the apiary, the other day, partly filled. When I discovered it an hour and a half later, it was burning full blast, ready for business.—*National Stockman.*

Keep the Bees at Work.

The bee-keeper cannot afford to have idle bees for want of room, or because they refuse to work in the supers. Try every way to induce them to work above.

One way is to replace one or two frames of young larva below, with empty combs, and then with the zinc excluder keep the queen below. By putting the brood in the center of the upper story, they can be started in the top.

Those working for comb-honey take sections that were partly built out the year before, or from hives that are already working above, and put in the hive they are trying to start.

This is where beginners are most apt to fail. They think something is the matter with the bees, when they only need coaxing to start them above. This should be done as early in the season as possible, for if neglected, and the bees are crowded below, they will get ready to swarm by starting queen-cells.—E. R. POND, in *N. W. Agriculturist.*

Prospects for Fall Honey.

In most localities in Central Illinois there is little white clover, owing to drouths of preceding years. Young white clover is very luxuriant, owing to the abundant rains, and may yet bloom later in the season. Sweet clover is very rank, and holds its own, wherever it has gained a foot-hold. This plant thrives in gravelly, sandy soil, and is very useful in keeping railroad cuts and embankments from washing.

The outlook for Fall honey promises well, as the rains will bring forth plants, to blossom later in the season—all the use bees would have for the sections this season, would be to propolize them up, and cluster in them if driven into the hive by rain.

When the combs of the brood-chamber are built out white, sections should be put on at once.—*Exchange.*

Chicago is America.

Whoever looks upon the World's Exposition as a mere business speculation, or as anything else than the joint work of a nation numbering 60,000,000 people, and as the greatest opportunity ever offered for competition between the various civilizations, commits a grave error.—*Hamburger Nachrichten*, Hamburg, Germany.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ADVERTISING RATES.

20 cents per line of Space, each insertion.

No Advertisement inserted for less than $1.00.

A line of this type will admit about eight words. ONE INCH will contain TWELVE lines.

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Advertisements intended for next week must reach this office by Saturday of this week.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to pay for another year.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. It costs:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The 7 above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75
Orange Judd Farmer	2 00	1 75
Farm, Field and Stockman	2 00	1 75
Prairie Farmer	2 00	1 75
Illustrated Home Journal	1 50	1 35
American Garden	2 50	2 00
Rural New Yorker	2 50	2 00
Nebraska Bee-Keeper	1 50	1 35

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

◆

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the BEE JOURNAL (with $1.00 to pay for the same), or 2 subscribers to the HOME JOURNAL may be sent instead of one for the BEE JOURNAL.

◆

Clubs of 5 New Subscriptions for $4.00 to any addresses. Ten for $7.50.

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00. For sale at this office.

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

Red Labels are quite attractive for Pails which hold from 1 to 10 lbs. of honey. Price, $1.00 per hundred, with name and address printed. Sample free.

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

Binders made especially for the BEE JOURNAL for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

It is a Prize in Itself.—I have just seen the ILLUSTRATED HOME JOURNAL for June, with the Rebus and offer of prizes for its solution. As the paper, at 50 cents a year, is a prize in itself for the amount, I take pleasure in enclosing it, and if my answer to the Rebus is correct, you can place me as a contestant for the prize. H. E. LAING.
Chicago, Ills.

The Bee-Keepers' Directory, by Henry Alley, Wenham, Mass. It contains his method for rearing queens in full colonies, while a fertile queen has possession of the combs. Price by mail, 50 cents.

☞ The Union or Family Scale has been received, and I am much pleased with it. W. H. KIMBALL.
Davenport, Iowa.

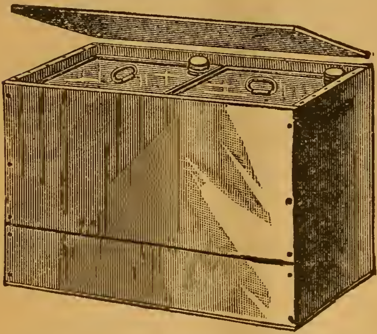
We send both the Home Journal and Bee Journal for one year, for $1.35.

Very Well Pleased. — The Sewing Machine and Scales are received in good order, and I am well pleased with them. They do good work. The sewing machine is ornamental as well as useful. The scales are very handy for family use.—G. RUFF, Burlington, Iowa.

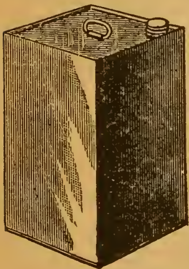
Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul-brood, can be procured at this office at 25 cents per ounce, by express.

SQUARE HONEY CANS



The above illustration shows the 60 pound SQUARE HONEY CANS which are becoming quite popular for shipping extracted honey.



They are enclosed in a solid case of wood, and the boxes contain either one or two Cans as may be preferred.

We can furnish them at the following prices, with a 1½-inch Screw Cap in the corner of each Can.

For the convenience of digging out candied honey, we can furnish these Cans with an additional four-inch Screw Cap for 5 cents extra on each Can.

1 Single Can ....(boxed).........	$ .45
12 " Cans ... "	5.00
100 " " ... "	40.00
1 box of two Cans................	.75
12 boxes "	8.40
100 " "	65.00

Square Glass Honey-Jars.

One pound, flint glass, per gross.....	$5.00
Two pounds, flint glass, per gross....	6.00
Corks for same, per gross	.75
Labels, per gross (name blank).......	.75
Tin-Foil Caps for same, per gross	.75

They will be shipped from Cincinnati, O.

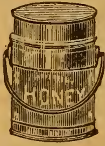
Wood Pails for Honey.

Wood water-pails, well painted outside, with 3 iron hoops, and a tight-fitting wood cover, at $2.00 per dozen. They hold 25 pounds of honey, and, when empty, can be used as an ordinary pail.

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

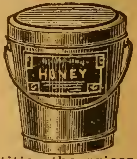
Tin Pails for Honey.

THESE Pails have full covers, and are excellent for selling Honey in the Home Market; and after the Honey granulates in them, it can be shipped anywhere with perfect safety. All sizes have a bail, or handle, and when empty are useful in every household.



The engraving shows STRAIGHT TIN PAILS, of which there are 3 sizes, holding respectively 3, 5 and 10 lbs. of Honey. Assorted Samples of the 3 sizes will be sent by express for 40 cts. In quantities, the prices are:

	Per doz.	Per 100
Gallon,..holds 10 lbs ..	$1.80....	$12.00
½-Gallon, holds 5 lbs....	1.50. .	9.00
Quart, holds 3 lbs	1.20...	7.00



The second engraving represents THE TAPERING TIN PAILS—made heavier and stronger than those with straight sides. The covers are deeper, and the top-edge of the Pail is doubled over, making it smooth and convenient to handle. Of the Tapering Pails there are five sizes, viz: 1-lb., 4-lb., 7-lb., 13-lb., and 25-lb. Assorted Samples of these will be shipped by express for 75 cents. In quantities, the prices are as follows :

To hold	1-lb.	4-lbs.	7-lbs.	13-lbs.	25-lbs.
Per dozen,	$ .75....	$1.25....	$ 1.50....	$ 2.00....	$ 3.25
Per 100,	5.00....	8.00....	10.00....	14.50....	23.00

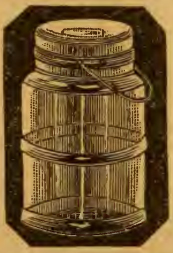
Red Labels for Pails.

Three sizes, ranging in size for Pails to hold from 1 to 10 pounds of honey. Price, $1.00 for a hundred, with the name and address of the bee-keeper printed on them. Smaller quantities, one cent each ; but we cannot print the name and address on less than one hundred. Larger quantities according to size, as follows :

	Size A.	Size B.	Size C.
250 Labels.......	$1.50	$2.00	$2.25
500 Labels.......	2.00	3.00	3.50
1.000 Labels.....	3.00	4.00	5.00

Samples of each of the Labels will be sent free, upon application.

Glass Pails for Honey.



They are made of the best quality of clear, flint glass, with a bail, and a metal top and cover. When filled with honey, the appearance is unequaled. They can be used for household purposes by consumers, after the honey is removed, or they may be returned, and re-filled by the apiarist.

For 1 lb. of honey, per dozen	$1.60
For 2 lbs. of honey, per dozen........	2.00
For 3 lbs. of honey, per dozen........	2.50

They are packed in barrels containing 12, 6 and 4 dozen of each size, respectively.

Discount 15 per cent. on orders for those exact quantities.

THOMAS G. NEWMAN & SON,
246 East Madison Street, - CHICAGO, ILL.

THE AMERICAN BEE JOURNAL CIRCULATES ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

Our Club Rates are: $1.90 for two copies (to the same or different post-offices); and for THREE or more copies, 90 cents each.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVIII. July 16, 1891. No. 3.

Editorial Buzzings.

I Could smile at the grave
  Of my friends; couldn't you,
If you knew that from heaven
  They smiled back at you?

We are sorry to learn that Mr. Geo. E. Hilton, of Fremont, Mich., is still suffering from the effects of *la grippe.* He is threatened with paralysis, and is very weak. This intelligence came from his brother, who called at our office last week. His many friends will be pained to read this notice.

A Hint to the many friends of the Rev. L. L. Langstroth will be timely. The amount subscribed for his annuity has again become due, and we hope that each one will now send him the usual "free-will offering." Let every lover of that "grand old man" act promptly, and help to pay our debt of gratitude.

Removal. — Circumstances have made it to our advantage to remove to more commodious quarters, and we may hereafter be found at 199, 201 and 203 East Randolph Street—two blocks north and one block east of our former location. This move doubles our floor space—of which we now have over 10,000 square feet. Our former location was in the fifth floor of a building, but we now occupy the *third* floor of a building near the corner of Fifth Avenue and Randolph Street. Our friends are always welcome.

Some One at Darrtown, O., wrote us to send a copy of the Constitution of the National Bee-Keepers' Union, but forgot to sign any name. Who is it? We cannot send anything until we know to whom to address it.

Aphides and Honey-Dew.—The aphides, this year, have been more plentiful than for the past many years. All the trees have been loaded with honey-dew. To keep it out of the clover honey has been almost a superhuman undertaking. Many a crop of honey has been entirely ruined by it. Let none of it be put upon the market—under any circumstances. That would be disastrous.

"La Grippe" is Still Here.—There were 424 deaths in Chicago during the week ending Saturday, July 4, an increase of 31 over the corresponding week of last year.

Callers were numerous last week. Mr. John T. Calvert, Business Manager of *Gleanings*, gave us a call on his way to Minneapolis to attend the meeting of Christian Endeavor. The next day Mr. F. H. Macpherson, Associate Editor of the *Canadian Bee Journal*, gave us a friendly call. He is traveling on the lakes for the benefit of his health. He is slowly recovering from the accident of last Winter. Success to both.

Colony or Swarm—Which?

Mr. E. L. Holden, of North Clarendon, Vt., writes thus about the use of these words to indicate bees settled down to work in a hive:

I have had something to do with bees from early boyhood, and always heard bees in hives called swarms, as well as when coming out or swarming.

As I am somewhat advanced in years (born May 5, 1814), and continue to call hives of bees swarms, I may be, perhaps, called an "old fogy."

As I never heard a good reason for changing the name, I still call them swarms, notwithstanding the majority of bee-keepers call them colonies.

In support of my practice, I refer to Webster, the acknowledged standard for definitions. He defines the word "swarm" thus: 1. A large number of small animals or insects, especially when in motion. A deadly swarm of hornets. 2. Especially a great number of honey-bees which emigrate from a hive at once, and seek new lodgings under the direction of a queen; or a like body of bees united and settled permanently in a hive.

The gist of the argument of our aged friend is that Webster's Dictionary states that a *swarm* is "a great number of honey-bees which emigrate from a hive at once, and seek new lodgings under the direction of a queen; a like body of bees united and settled permanently in a hive."

If the statement of the Dictionary, as quoted in the last line, must settle the matter, how about the sentence just preceding it, viz.: that the bees "seek new lodgings *under the direction* of a queen!" Does that statement *settle that matter, too?* Every well-informed bee-keeper will dispute that assertion in the Dictionary!

The queen is *not* a ruler in any sense of the word. She is the mother—the egg-layer—and is governed and controlled at every step by the bees! She is always under the direction of "the worker bees!" She does not *lead* the swarm, but is generally the last to leave the hive, and quite often has to be sought out and *driven from the hive by the bees!!*

If the statement in one part of the sentence is so erroneous, *why* should the latter part of the same sentence be infallible? Even Mr. Holden will condemn the former, while he desires to defend the latter!

But our venerable correspondent continues his argument thus:

Now let us see how Webster defines the word "colony." It is:

1. A company of people transplanted from their mother country to a remote province or country, and remaining subject to the jurisdiction of the parent State, so long as they remain in dependence on the mother country; as "the British colonies in America."

2. The country planted or colonized—a settlement.

Now, in view of these definitions, I feel justified in using the word swarm to describe a mass of bees anywhere. What objection can be made to its use? It is shorter and easier to write or speak than colony. E. L. HOLDEN.

We are well aware that the word "colony" is used in other senses, but its fourth definition, as given in Webster's Dictionary, is the only one applicable to bees, and that Mr. Holden did not quote. It is this: "A number of animals or plants living or growing together." Bees are animals [class, insecta]; and a number of bees living together may very properly be called a colony.

The use of the word "swarm" for colony cannot be justified by any rule of the language! A "swarm" issues from a hive for the purpose of increasing the families or colonies, but when it settles down to the business of house-keeping it is a colony, and not a swarm!

Because it was erroneously called a "swarm" in "ye olden time," no more proved its *correctness* or propriety, than when the only perfect female in the hive was called a *king!!*

Formerly many erroneous terms were used, but with our advancing intelligence and scientific research, it would be unpardonable to return to the darkness and ignorance of the past, for our theories of government or definition of words.

The ancients believed that the earth was a plateau floating in water, and that the sun revolved perpendicularly around it; it would be just as reasonable for us to return to that exploded theory as to return to the inappropriate use of the words or phraseology of those benighted ages.

No; no! At the very dawn of the twentieth century, under the benign rays of the refulgent glory of the sun of this ever-advancing and progressive era, let us look *forward* (not backward) for our ideas, our inspiration, and our language!

For currents of life run ever away
To the bosom of God's great ocean.
Don't set your force 'gainst the river's course,
And think to alter its motion.
Don't waste a curse on the universe—
Remember, it lived before you.
Don't butt at the storm with your puny form—
But bend and let it go o'er you.

Bugs.—Eberhart's Elements of Entomology is a new book of 144 pages. It has 40 full-page plates, embracing more than 300 figures. It contains full and complete directions for collecting, mounting and preserving insects; a pictorial key to all our common insects, and a full explanation of technical terms.

In describing the collecting and mounting of insects—nothing essential is omitted. Useful instructions are given on time and places to hunt, etc.

There is no amusement productive of as much benefit to one's health as the capturing of thousands of insects, impaling and preserving them. This book tells you how to do it. It can be obtained for 35 cents of A. Flanagan, publisher, 185 Wabash Ave., Chicago, Illinois.

Farm Law.—A very useful book for the farmer is on our desk. It is entitled: "The Law Concerning Farms, Farmers, and Farm Laborers, Together with the Game Laws of all the States, by Henry Austin, of the Boston bar." Price, $2.00. It has 250 pages, and is a "boiled down" statement of the common and statute farm laws, the knowledge of which would save a large amount of litigation. It is written in the simplest language, so as to interest every reader. We commend it to those who want enough knowledge of law to keep them out of lawsuits. It can be obtained at this office.

Beautiful Yellow Bees.—A cage, containing an untested queen and a dozen bees, are on our desk. They are from the apiary of John E. Michael, of German, O., and are beautifully marked with five bands well developed, and are as handsome as the most fastidious bee-fancier could wish for. Mr. Michael writes thus about them:

The bees are the progeny of an untested queen, which I mailed to Dixon, Ills., a month ago. The untested queen, which I send you, has just commenced to lay, and is the daughter of the mother of the five-banded Italian queen which Mr. A. I. Root mentioned in *Gleanings*. I shall send out many next month just as handsome as this queen.

United Efforts accomplish all the great achievements in this world. Alone, it is exceedingly difficult to do that which can quite easily be done by united persistent efforts. The following letter from friend Hambaugh illustrates this matter very forcibly:

FRIEND NEWMAN:—Please accept my sincere thanks for your assuring words of appreciation of our efforts at Springfield; and should the work we have accomplished redound to the good of apiculture, the fruition of my hopes will be realized. I will say, however, that our efforts would have been futile had we not the assistance of such staunch friends as yourself, and a host of others from the outside. Yours sincerely,

J. M. HAMBAUGH.

Spring, Ills., July 6, 1891.

Another Victory.—The second case against G. W. Cole, mentioned last week on page 41, has been decided in his favor by Justice Bass. The National Bee-Keepers' Union is managing the case, and this is another victory for the Union. The following items from the local papers will give the details in their own language:

After devoting nearly all of Tuesday to hearing the testimony of neighbors and bee-keeping experts, and the arguments of the Hon. M. Walker for the prosecution, and 'Squire Stearns and B. M. Chiperfield for the defense, Justice Bass decided that G. W. Cole had not, since May 12 (the date of the former similar complaint against him), been guilty of keeping bees upon his premises in violation of the law in relation to nuisances.

It was proven that since the date mentioned, one person had been stung by a bee, which might have come from one of the 37 colonies kept by the defendant.

It was shown also that some persons had been terrified and annoyed, although not stung, by bees. It was in evidence that bees, presumably belonging to the defendant (or some other or others of the four bee-keepers in that immediate vicinity) got into a watering trough and sometimes stung the noses of horses drinking the water in which the insects, washed from the sides of the trough, were drowning. One witness testified to the bees soiling clothes hung out to dry, so that some pieces had to be washed over.

Offsetting this, seven bee-keepers testified to the pacific disposition of the honey-gathering insect, and that only during a very few days in early Spring was the presence of a colony of bees near drying linen objectionable.—*Canton Register.*

Mr. Cole had previously been defendant in a similar suit, in which his neighbors, represented by Mr. Shaffer, said that the quarter of a hundred hives of bees belonging to Mr. Cole, were a nuisance, especially during the "emptying" period in the Spring.

The case went against Mr. Cole, who took an appeal. While the case was in this shape, Mr. Shaffer brought another suit on the same ground as before, and the defense proved, by experts, that the case was not similar, the later time in the season producing change of circumstance, as the "emptying" only takes place after the bees have been shut up for a long time.

It was proved by witnesses that the nuisance alluded to continued during the Summer months to the detriment and defacement of various and sundry articles of clothing, that had been washed and hung out to dry.

The experts testified that such things were impossible and contrary to precedents established by all well regulated bees. Bees were innoxious, but disliked having their hair stroked the wrong way, and were liable to produce facial contortion in whoever pinched or stuck pins into them.—*Peoria Journal.*

That terrible bee case was decided in accordance with the forecast given in the *Journal* yesterday. Mr. Cole came out ahead this time. Now, for a little common-sense forbearance. It is no use trying to force Mr. Cole to move the bees until cold weather sets in; for if removed now, the bees will straggle back by thousands, and their voice will be for war. If the matter is allowed to rest until Winter, there are grounds for believing that the tenants (Italian and native born) will be moved to a less crowded locality.—*Peoria Journal.*

Now, that both sides have won a round, the thing is pretty badly mixed. Mr. Cole has 37 colonies of bees, and, according to the best of our recollection, there are fully one million bees in a nest, and every one has a stinger with a mighty sharp point. And, counting the points made for and against the bees in the various discussions on the streets, there must be a point in the case for every bee, and the fact that there are thus in the neighborhood of 75,000,000 points involved, is what causes the lawyers to smile, and it is what will make the judge and jurors swear, when Mr. Cole's appealed case comes up in the Circuit Court next month.—*Fulton Republican.*

Next month the appeal comes up before the Circuit Court, and we have no doubt but that it will be *another victory* for the Union. Concentrated venom is the cause of the persecution.

Father Langstroth, although occasionally experiencing a little lifting of "the dark cloud," yet he has had no material relief for nearly two-and-a-half years.

Queries and Replies.

Comb-Honey and Separators.

Query 775.—1. Does the use of separators influence the amount of honey stored in one-pound sections? 2. If so, to what extent? 3. Which way would the crop have the greatest market value, with or without separators? 4. Which are the best, wood or tin separators?—Iowa.

1. Not that I could ever see. 3. With separators. 4. I use tin.—G. M. Doolittle.

1. None of material consequence. 3. With separators. 4. Wood.—J. M. Hambaugh.

1. I think not. 3. I find no difference. 4. I find them equally effective.—R. L. Taylor.

1. Not a bit. 3. With separators, every time. 4. Wood—made of poplar. —C. H. Dibbern.

Having never used separators, I cannot answer these questions. I do not like to guess at things.—M. Mahin.

1. No. 3. With separators. 4. Tin for wide frames, and wood for all other styles of surplus cases.—James Heddon.

1. I think not. 3. With separators, is my experience. 4. Whichever costs the least in proportion to the time that they will last.—A. J. Cook.

1. Not much, if any. 3. With separators for distant markets. Possibly some home markets are better without. 4. Wood for loose, tin for fixed.—C. C. Miller.

1. I think not, as I have tried it with and without. 3. With me the use of separators would increase the value of a great deal of it from 1 to 2 cents per pound. 4. Wood.—H. D. Cutting.

1. I am of the opinion that it does, to some extent; but to what degree I am unable to say. 3. Ordinarily with separators, as the honey comb comes out in nicer shape. 4. I prefer the tin.—J. E. Pond.

1. I never used separators. 2. I do not know. 3. It depends upon the market; if I shipped my honey I should use separators. 4. Having used neither, I am not prepared to say.—Mrs. L. Harrison.

1. Possibly it may, but I think not much. I interpret this question to mean the aggregate amount stored by the colony. 3. That produced with separators as a rule. 4. Either will do. Theoretically, wood is preferable.—Eugene Secor.

1. As I use crates, and fill sections two-thirds with foundation well fixed, I have never had the need of separators to secure straight combs. If you cannot get your bees to make straight combs by proper management, use separators, but you will get less honey. 4. Wood is as good as tin, and less expensive.—J. P. H. Brown.

1. I think not, with open side sections and perforated wood separators. I believe they do as usually used. 2. The difference may amount to as much as one-fourth of the crop in favor of sections without separators as usually made and used. 4. Perforated wood separators are better and more durable than tin.—G. L. Tinker.

1. According to my experience, separators may or may not influence the amount of surplus stored. Some seasons there appears to be little or no difference, while the difference is plain enough under different circumstances. 2. The extent is an uncertainty. 3. That depends on your market. It does not effect the profits, with me, either way, because I can sell the unshapely sections for as much as is realized on the perfect ones. 4. I prefer tin, because it takes up less room in the section cases, and is the most easily cleaned.—G. W. Demaree.

1. There is not much difference in the amount of honey stored, whether separators are used or not. 3. Comb-honey produced where separators are used is much straighter, and when crated for market the combs will not interfere with one another; there is no waste by leakage, and not being "sticky," and, therefore, undesirable, it is of greater market value. 4. Whichever is cheapest and most convenient.—The Editor.

Convention Notices.

☞ The Carolina Bee-Keepers' Association will meet at the Court House, in Charlotte, N. C., at 10 o'clock a.m., on Thursday, July 30, 1891.
A. L. BEACH, Sec., Pineville, N. C.

☞ The Rock River Bee-Keepers' Association will meet at Sterling, Ills., on Thursday, Aug. 6, 1891.
J. M. BURTCH, Sec., Morrison, Ills.

☞ The ninth annual meeting of the Susquehanna County, Bee-Keepers' Association will be held on Thursday, Sept. 3. at South Montrose, Pa.
H. M. SEELEY, Sec., Harford, Pa.

Topics of Interest.

Thunder Storms and the Honey Crop.

JOSHUA BULL.

The prospect is not very encouraging for a good honey harvest in this locality, the early part of the season having been exceedingly dry. From April 11 to June 15 we had only about three-fourths of an inch of rainfall, and white clover was very much dwarfed in its growth on account of the dry weather; nevertheless it commenced to bloom early in June, and from June 10 to 15 yielded nectar very freely.

My bees, being in excellent condition, and ready for the harvest, stored surplus in the supers quite freely for a few days.

From June 16 to 18 we had a series of thunder storms, with heavy rains, during which 5 or 6 inches of rain fell, and the ground became thoroughly soaked, and we have had occasional showers since, in consequence of which vegetation has taken a new start.

White and alsike clovers are now blooming profusely, but the bees do not seem to store honey as fast since the rain came as they did a few days before.

We shall probably not get much, if any, basswood honey this year, frost having destroyed most of the buds. Unless the clovers continue to yield honey beyond their usual season, and more freely than they have done for the past two weeks, the white honey harvest will be very light in this vicinity.

If there is an abundant crop in some places, as has been intimated by reports in some of the papers, I hope that those who are thus favored will not be in a hurry to sell their honey at reduced prices, thinking that there is going to be an overplus on the market.

Whatever there may be above an average crop in some localities, may all be needed to make up the shortage in other parts; so that, on the whole, there will be only an average supply for the general market.

I hope that all bee-keepers who take any interest in the matter, will make careful observations this season, as to the effect of thunder storms upon the flow of nectar in the flowers; and report the result of such observations in the BEE JOURNAL.

There is, of course, a vast difference in the force of such storms, and it is but reasonable to expect that the effect (if any) would be in proportion to the violence of the storm. A passing cloud, with a little rain, and a few claps of thunder, can hardly be called a thunder storm, but only a "thunder shower," and may not produce any discernable effect upon the flow of nectar.

In this State we sometimes have thunder storms that continue for hours together, and it is not unusual to see one continuous blaze of lightning for several seconds, as though the very clouds were on fire. Occasionally a streak of chain lightning will come so near that it will thrill every nerve in one's body like a shock from an electric battery, and cause even the ends of your fingers to tingle; while successive peals of thunder make the very earth tremble beneath your feet.

Such a storm presents a scene of sublime grandeur beyond description to every lover of nature who has nerve enough to behold, with steadfast gaze, the wonderful display of the elements.

Whenever such a storm passes over this locality, I feel quite safe in predicting that the bees will not store very much surplus honey the next six days at least, and I should like to know if similar storms do not produce similar effects in other localities. Who will make careful observations and report?

Seymour, Wis., July 6, 1891.

Bees and Honey—An Allegory.

It is really a lovely garden. Never were there whiter lilies, nor bluer violets, nor more interesting pansies.

But it needs something. I think it is bees.

For bees are so picturesque! And then the hives—the hives are as picturesque as the bees themselves. Apple trees without bee-hives under them are as forlorn as lilies without bees over them.

So we bought some beautiful hives, and placed them in the orchard, just on the edge of the garden. Soon they began to be filled with delicious honey in dear little white cells; but the bees were nowhere to be seen. Every morning they disappeared, flying far out of sight, and the lilies and roses were as forlorn as ever. We had the credit of having bees, for every one could see the hives and taste the honey; but we did not have the bees.

So one morning I went out and talked to them about it.

"Dear bees," I said, "what is it that you miss in the garden? Every morning you fly away; but where can you find whiter lilies, or bluer violets, or more interesting pansies?"

"We are not looking for whiteness, or blueness, or interestingness," the bees explained. "We are looking for honey; and the honey is better in the clover field that is only a mile away."

"Oh! if that is all," I exclaimed gladly, "pray do not have the honey on your minds—"

"We do not," they said. "We carry it in little bags."

"I mean, do not mind about the honey—"

"Certainly not; how could we, when we haven't any minds?"

"But please do not feel obliged to hunt for honey. I do not care at all for honey; that is," I added hastily, as a slight buzzing made me fear that perhaps I had hurt their feelings, "I like you, you know, for yourselves alone, not for what you can give me. The honey is delicious, but we can buy it very nice at the grocer's. If you like honey for yourselves, I will buy some and fill the hives for you, so that you need not work at all, if you will only stay in the garden, and hover over the lilies, and—and—be picturesque."

They promised to try. And they did try. Whenever I looked from my library windows I could see them practicing their hovering, and they really hovered extremely well. Satisfied that my garden was at last complete, I gave up watching it, and devoted myself to literary work. Every morning I seated myself at the desk and wrote rapidly until noon. But one day I was interrupted by a bee.

He had flown in at the window. Perching himself on the lid of the inkstand, he waited awhile; then at last asked quietly:

"Why are you not out-of-doors this beautiful morning? The garden is lovely; I cannot see—" and he glanced critically at the vases about the room—"I cannot see that these lilies are any whiter, or the violets any bluer, or the pansies any more interesting than those out there. And we miss you. A garden really ought to have people walking in it. That is what gardens are for. I do not see why we must be out there to be seen when there is nobody to see us."

"But, dear bee, I am not looking for flowers this morning; I am writing."

"And what are you writing?"

"A sonnet."

"Are there no sonnets to be had at the stores?"

"Oh, yes! Shakespeare's and Milton's and Wordsworth's, of course."

"And are your sonnets better than Shakespeare's?"

"Why, of course not."

"Then let your sonnet go. Come out in the garden with us, and on the way home I'll buy you a sonnet at the store; a Shakespeare sonnet—the very best in the market."

"But, you see, I want to try making a sonnet of my own."

"Very well, let me see you try."

I took up the pen again, and was soon absorbed in my rhymes and rhythm. Indeed, I had quite forgotten that the bee was there, till he stirred uneasily, and finally sighed.

"Are you not happy in the garden?" I asked.

"Not very."

"But why not? Haven't you all the liberty you want?"

"No; we have every liberty except the liberty we want."

"And that is—"

"The liberty to work. We find that it is not lilies; it is not clover; it is not honey; it is gathering the honey that we like. It is not even gathering the honey for you that we care so much about; because, you see, you do not like honey; it is just gathering it."

"I do not understand. I cannot see how anybody can really like to work."

"But we do. Suppose you finish your sonnet, while I try to think over a few arguments to present to you later."

So again I took up the pen, and again I was soon happily absorbed, and had entirely forgotten the poor bee, till I heard him say wearily:

"It does not seem to be very easy to write a sonnet?"

"No," I exclaimed enthusiastically, "it is not at all easy. That is the charm of it. Anybody can write some kind of verse, but very few people can write sonnets. There are a great many rules for making a sonnet; you can only have just so many lines, and just so few rhymes, and the sentiment must change in just such a place, and very few people have the patience for it. Even Shakespeare did not keep to the severest style of sonnet."

"And are you trying to obey all the rules?"

"Yes."

"Why?"

"Why, for the fun of it. It is so interesting to see whether anyone can do it."

"But it must be awfully tedious; and from your own account you are really working harder over it than you need to."

"Only because it is a great deal more interesting to do a thing well than just to do it. Let me read you something from Wordsworth's sonnet about the sonnet. He says:

> In truth the prison unto which we doom
> Ourselves no prison is;

meaning that if we are willing to take pains there is a great deal of enjoyment in working hard over a thing if it is a very small thing. He gives a great many comparisons about nuns being contented with their narrow convents, and hermits in their cells, and students in their libraries, and weavers at the loom; and here, oh here is an allusion to you, dear bee: he tells how—

> —Bees that soar for bloom,
> High as the highest peak of Furness-fells,
> Will murmur by the hour in foxglove bells.

"That is just what you meant, is it not?—that you are one of those he speaks of who have felt the weight of too much liberty?"

"Yes, that is what I meant; but I think I said it better than he says it. If it is a fine thing to say what you mean in just fourteen lines, why is it not a finer thing to say what you mean in fourteen words? And really it seems to me that I put the whole of his sonnet into saying that it is not for the honey that I care, nor for the sonnet that you care; but the fun of the work."

"The fun of the work! That is a new idea—but I believe you are right."

Of course I am right. Sweetness is all very well, but I should think it would be very tiresome just to be sweet, like a flower; I had rather be a bee and have to hunt for the sweetness."

"And I had rather be a human being and have to make things sweet. For, after all, if a bee does not find sweetness, he cannot have any, while people can make it for themselves. Do you know, by the way, that you have given me a splendid subject for a poem?"

"Perhaps I have. But if you will excuse me, I will be off to the clover field, and my advice to you is, if you must write a poem, try to put it in four lines, instead of fourteen."

So I tried, and this is the poem:

> Sweetness in being sweet, that's for the flowers;
> Sweetness in finding sweets, that's for the bee;
> Sweetness in making sweet sorrowful hours;
> That is the sweetness for you and me.

—*St. Nicholas.*

Germ Theory of Foul-Brood.

C. J. ROBINSON.

On page 538 Mr. S. Corneil states his factious objections to all that I have written since 1882 on the subject of foul-brood.

Mr. Corneil starts in with the erroneous assertion that I "lucidly admitted that there is no such thing as spontaneous generation; that there are no latent spores in living, healthy tissues."

This quotation is about the gist of what I have been claiming, and that, too, in the face of general opposition. I claim to have discovered (Mr. C. alludes to it as my "pretended discovery") that foul-brood *originates* by spontaneous fermentation of dead brood—that spores (seeds of ferment) are present in all living tissues and all fermentable matter, and that, under certain conditions, vegetation of the seeds or spores occurs.

Foul-brood in bees, and small-pox and measles are strictly fermentative diseases. Any assertion or attempt to show that I have in any wise admitted anything different from the position taken by me in the aforesaid claim is false, as a perusal of my writings will clearly show.

Mr. Corneil occupies considerable space, but he fails to touch the points that forms the issue. He dwells on what he calls my "pretended discovery," claiming that I was the first who discovered that foul-brood is a germ disease. I have not claimed any such thing, in the sense in which he puts it. All I claim to have discovered is that foul-brood originates by reason of germs being quickened in the way I set forth.

Now, let us see how the case stands! He conceded, on page 220, that "there is little doubt that Mr. Robinson had *a case of genuine foul-brood propagated outside of the hive*, but not as the result, as he supposes, of spontaneous fermentation."

Please note that he squarely admits my allegation, so far as it relates to the propagating of a case of foul-brood, so there is no question raised by him as to the fact that I discovered (yet he now sees fit to characterize it as a "pretended discovery") that foul-brood originated in dead brood outside of the hive. Stick a pin here, and then follow the special points in the issue between Mr. Corneil and myself.

He sets up in the issue that the larvæ died in the combs left out of the hive, and that: "When the resistance of the living tissue cells ceased, *the spores of bacillus alvei floating in the air* made a lodgment, and found in the dead larvæ a congenial medium for their growth."

Mr. Corneil himself is the father of the doctrine that "the spores of bacillus are floating in the air," and that the spores seize upon "dead larvæ" (?) If foul-brood spores do float in the air as per Corneil, all "dead larvæ" is subject to being a "lodgment" for the floating spores. This doctrine that Mr. Corneil promulgated concerning spores of foul-brood floating in the air is more ridiculous than his ominous heralding of the idea that foul-brood may occur by contagion on comb-foundation.

Mr. Corneil says: "Mr. Robinson might better have conceded this point (that foul-brood seriously effects mature bees) with the others." I am not so impudent as to advise Mr. C. what he "better" do or not do, but I suggest that he has something to write about in the support and defense of his doctrine—all his own—that foul-brood germs that were "floating in the air" found a lodgment in the dead larvæ in the combs of brood I exposed.

Mr. Corneil makes an attempt to impress readers with the belief that I am guilty of fraudulent "inconsistencies." He examined the files of the bee-periodicals to find what I had written, and he found in the *Bee-Keepers' Exchange*, for 1882, an article that I wrote on the subject of foul-brood, and he quotes a sentence, from which he assumes to tell readers of the BEE JOURNAL that they "will be surprised to learn" that I was aware of Dr. Shœnfeld's experiments previous to the announcement of my "pretended discovery." That is, I claimed to be the first who discovered that foul-brood is a germ disease, when I well knew that Shœnfeld had announced, years before, just what I aimed to palm off as my own discovery.

HOME APIARY OF C. SCHLIESMAYER, PASADENA, CALIF.

What are the facts in the case? Referring to the article in the *Bee-Keepers' Exchange*, I stated there that "if the fermentation has been favorable for the development of the virus, that will reproduce the putrid fermentation, then the so-called foul-brood is present, originating spontaneously by reason of the peculiar fermentative process—that every iota of the putrid matter will, like a 'little leaven, leaven the whole'—that Shœnfeld, of Germany, was the first who demonstrated by experiment—infected healthy brood with foul—and thus discovered that the poison is transmitted from hive to hive." In other words, I referred to Shœnfeld as being the first who determined by experiment that suspected foul-brood would, or would not, as the case might be, infect healthy brood.

There is no sure way of identifying foul-brood in its early stages, from looking at the suspected brood, but a test does not fail to decide whether or not the suspect is, in reality, foul-brood.

Yes, I did know of some of Shœnfeld's writings when I referred to him. I knew he was, as I now know that he is, a theorist—not infallible, but not so fallible as to theorize—like Mr. Corneil—that foul-brood spores float in the air at all times, and that comb-foundation made of wax from foul-broody combs infects brood reared, or hatched, on such foundation.

There is no use in replying to Mr. Corneil in detail, so "I have now done with that gentleman" for the present,

Richford, N. Y.

Texas Apicultural Notes.

A. C. ATEN.

We are still having plenty of rain, and quite warm weather.

Bees have been doing well, but nothing extraordinary. The horsemint season is about over.

Crops of corn, wheat and oats are very good, and cotton looks well. Corn is in roasting ear, and a good rain last night insures a good crop, no accident intervening.

I had a good opportunity, not long since, to test the question sometimes discussed in the BEE JOURNAL, as to whether a thunder storm influences the honey-flow or not. There was an ordinary thunder storm, and a week later an electric storm of great magnitude, when there was one continuous roar of thunder, and not an instant without a lightning flash, all high in the heavens, and as grand a sight as I almost ever witnessed.

On both of these occasions the bees gathered honey as busily the day after as they did the day before. I, therefore, conclude that thunder storms do not effect the honey crop.

I witnessed something in my apiary not long since that indicated that bees have very little bee sense—at least sometimes. I knew that they would try to make queens out of drone eggs when they had no other, but did not know that they would do that when they had plenty of worker eggs. I found a hive with a laying worker. I carried the hive about two rods and shook all the bees out on the ground, then returned the hive to its stand, thus getting rid of the laying worker. Having no queen-cell at hand, I gave them a fine frame of eggs and young brood. In a few days I examined them, and found they had not built a single cell on the frame I had given them, but to my surprise, instead, they had built some half dozen splendid cells on a frame containing drone-brood from the laying worker, which, of course, would result in nothing more than drones.

I am now trying N. D. West's coil-wire queen-cell protectors, and find them very well adapted to the purpose for which they were made.

There is some inquiry on pages 677 and 678 in regard to black, shiny bees. While old bees often lose all their hair, especially robber bees, that are crawling through all kinds of little cracks and holes, yet undoubtedly there is a disease which is sometimes called the nameless or trembling disease, all of the bees affected being hairless and shiny, as Mr. Craig expresses it.

These bees are carried out by the well ones, sometimes in large numbers. I have found salt very beneficial, throwing a small handful in the entrance, but a sure cure is to give them a young queen.

Round Rock, Tex., June 29, 1891.

Erie County, New York, Convention.

ROBERT E. MEATYARD.

The second meeting in 1891 of the Erie County Bee-Keepers' Association was held at Sardinia, June 2.

After the opening formalities were over, President L. D. O'Dell requested all apiarists present to give the number of colonies of bees of both Fall and Spring count.

The President reported 98 Fall; 52 Spring. S. S. Sleeper, 132 Fall; 111 Spring. Chas. Penton, 75 Fall; 35 Spring. Milton H. Pitcher, 77 Fall; 23 Spring. Edwin Rice, 86 Fall; 76 Spring. Aaron Karney, 15 Fall; 11 Spring. Mrs. Crosby, 42 Fall; 42 Spring. A. Graves, 13 Fall; 11 Spring. Wm. Eastman, 13 Fall; 6 Spring. Mr. Briggs, 5 Fall; 5 Spring. B. Briggs, 6 Fall; 6 Spring. V. Johnson, 11 Fall; 10 Spring. John G. Goodremote, 54 Fall; 49 Spring. H. Butler, 16 Fall; 10 Spring. Mr. Andrews, 51 Fall; 41 Spring. B. Goodin, 22 Fall; 14 Spring. R. M. Ballid, 55 Fall; 51 Spring. Robert Meatyard, 63 Fall; 23 Spring.

Chas. Penton read an essay on feeding bees, followed by some very interesting remarks by Rev. Vaught, during which he gave the association a hearty welcome.

Some very fine music was furnished by Prof. Knott and Willie Pitcher.

An invitation was extended for new members, to which several responded.

The question box was then opened, and the following questions discussed:

"How can I best increase one colony to four, using full combs and sugar for feed?"

S. S. Sleeper—Would increase by natural swarming if at all.

Luther Corey — Would increase by division, and gave his method.

"Will foul-brood exist in foundation?"

Elmer O'Dell—Think heating to the boiling point destroys the germs of the disease.

S. S. Sleeper—Heating to 212° will not kill the microbes in all stages, and it will be necessary to heat the wax several times in order to entirely destroy them.

"Is there any way of separating pollen from beeswax?"

Addison O'Dell—Place the melted wax in a warm place, so that it may cool gradually. The pollen will settle to the bottom of the cake, when it may be easily scraped off.

Luther Corey agreed with this, and would always melt with water.

"What do bees gather from tamarac and balsam trees?"

S. S. Sleeper—Propolis.

A. Graves—Propolis.

S. S. Sleeper read an essay entitled, "Bee-Keeping, a Proper and Legitimate Branch of Agriculture."

"What was the cause of our heavy losses in bees last Winter?"

Mr. Briggs—My bees starved to death.

Aaron Karney — Queenlessness and starvation.

Luther Corey—There were different causes.

Chas. Penton—Extracting from the brood-chamber.

Addison O'Dell—Lack of Fall flow of honey. Did not breed late in the season, consequently went into Winter quarters with old bees.

Milton Pitcher agreed with the last, and the general opinion was that it was on account of the lack of Fall flow of honey, as several who had such wintered their bees well.

"Is it profitable to feed artificial pollen early in the Spring? If so, what kind is best?"

S. S. Sleeper — When they cannot obtain natural pollen, it will be profitable. I use rye and beans, ground fine, in the proportion of two parts of rye to one of beans.

Mr. Meatyard—Have used wheat flour with good results.

"What is the best way of stopping robbing?"

Mr. Eastman—I contract the entrance to one bee-space, and smoke the colony that is doing the robbing.

A. Graves—Would anger with a feather those that refuse to guard the hive.

Chas. Penton—I find the colonies that are doing the robbing and gash their frames with honey.

"How can we best preserve our surplus combs?"

S. S. Sleeper—Store them in a dry place, putting them about one inch apart, and fumigate them frequently with sulphur.

"Which are the best bees, the Italians or blacks?"

S. S. Sleeper—For gathering honey, the Italians, by all odds.

Elmer O'Dell—The Italians are far superior when running for extracted-honey. For comb builders, I prefer hybrids.

"Why does some honey candy while others do not?"

Elmer O'Dell—Difference in the honey.

Springville was chosen as the place for the next meeting.

After a vote of thanks to Rev. Vaught, and to the people for the use of the church, and to Prof. Knott for his fine music, the meeting adjourned.

Ellicott, N. Y.

Advice to Beginners.

A. N. DRAPER.

After reading the article under the above heading, on page 283, by Mr. Heddon, I thought that perhaps a few facts and quotations would not be uninteresting to beginners.

First. On page 682, American Bee Journal, Oct. 26, 1889, second column, I find the following under Mr. Heddon's name "in regard to the number of openings needed in a honey-board." He believed that one row would be sufficient for a strong colony, etc. If this be true, what about the much-lauded break-joint honey-board?

On page 642 of *Gleanings*, Sept. 1, 1890, first column near the top, I find the following: "In connection he uses a wooden thumb-screw to reduce propolis accumulation. Mr. Tunicliff was very enthusiastic over this arrangement. He declared it the best frame extant. As to the thumb-screw, he owed Mr. Heddon nothing for it, for he had borrowed it from Mr. Manum, who had used it for many years before Mr. Heddon. He did not consider Mr. H. the first one to use closed-end frames in a tight-fitting box, for he had used them both in combination ever since 1878.

On page 45, "Success in Bee-Culture," near the bottom, I find the following: "For the past two seasons I have produced both in nearly equal quantities, and have now decided to make comb-honey my main crop hereafter. 'But,' I hear some one say, 'more bees will go to the fields when the combs are extracted, and no comb-builders are needed at home; hence, we must get more honey when the extractor is used.' Doubtless this is true, but it is equally a fact that I can keep a greater number of colonies without over-stocking my field when devoted to comb-honey storing, and without a corresponding increase of labor in caring for them [nonsense]; hence *I will* keep more bees, and raise *higher-priced* honey."

Then, Mr. Heddon describes his new hives. Extra-fine, four-piece dovetailed section, and his methods for producing large quantities of extra-fine white comb-honey, etc.

Later, when comb-honey was selling everywhere for from 12½ to 15 cents per pound, he was claiming in the bee-periodicals that he was selling his readily to the farmers at 20 cents per pound, on account of his honey being so nicely put up. It is in the BEE JOURNAL somewhere, but I cannot refer to the page.

On page 694 of the BEE JOURNAL for 1889, I see his crop of honey from 200 colonies was 1,000 pounds of comb, and 4,000 pounds of extracted, but I have seen no statement as to the price at which this was sold, though on the last page of his circular (1891) I find the following: "During the past year I have sold, almost exclusively to bee-keepers, etc., the choicest extracted-honey. I sold it at the low price of 8 cents per pound for basswood and white clover, and 7 cents per pound for bright amber, and 6 cents per pound for darker amber; all grades in 58 pound cans, net. The same goods were sold in barrels of 500 pounds net, at one cent per pound less than the above figures, all delivered free on board cars here; no charge for packages."

Lower down he says: "I expect the above prices will hold for the coming, season," etc.

This would place the price of his clover honey at 7 cents per pound in barrels, and the dark honey at 5 cents.

This is good advice to give, especially as the demand for extracted-honey has been good, at from 7 to 10 cents per pound. My entire crop netted about 8½ cents, though I sold three barrels at 6 cents, to close it out.

On page 324 of *Gleanings* for May, 1890, I find the following from Mr. Barnett Taylor: "In mentioning my hive at the Wisconsin Bee-Keepers' Convention at Madison, you say it has a rabbeted top similar to my simplicity hive, to keep out wind and rain. I want to explain that the rabbet in my hive is not made to keep out wind and rain, but to always keep just a bee-space between the frames of two or more hives, when tiered up on top of each other. I now have a hive of the first lot of 50 that I ever made. I made them in 1865......The only change I ever made in my hive was in making the frames deeper, and in this respect I have tried various depths; but of whatever depth, I used them in pairs."

On page 118, of *Gleanings*, 1891, I find the following advertisement:

"JUST OUT! Something entirely new in hives." An application for his circular discloses the fact that his "something entirely new" is simply a frame without a bottom-bar. If you will take the trouble to look at an old *Bee-Keepers' Text-Book* or *Bee-Keepers' Journal*, published by H. A. King, at Nevada, Ohio, over twenty years ago, you will find the same thing in the old American hive, of which thousands were made and sold all over the country.

Mr. Heddon will please excuse me, but the following quotation seems so appropriate in this place. You will find it on page 683, AMERICAN BEE JOURNAL, Oct. 26, 1889, first column near the top: "I tell you, friends, the man who steals bread, goaded to the act by the sight of palid lips of starving wife or child, has an excuse; but he who steals the honor that belongs to another, steals something that he cannot successfully use, and something that fits him only as the armor of a plumed knight fits a pollywog, and is a thief by nature."

Let me call your attention to still another passage, on the same page and number of the AMERICAN BEE JOURNAL, second column: "Mr. Heddon warned bee-keepers against this seed business... You know that I publish a local paper out at Dowagiac. Well, I procured a cut of alsike clover. Then I wrote an article on alsike as a desirable crop for farmers to raise. I spread it on pretty thick, but I guess I did not stretch the truth any. But not a *word* did I say about the honey-producing qualities. Then, I went to our seedsman and showed him what I had done, and induced him to put in a stock of seed. I then gave notice of where the seed could be obtained. The result is, that the farmers have sowed largely of the alsike. [Now notice.] When a man has no paper to work with, and cannot work with some other paper, the next best plan is to get some farmer interested, and let him do the talking."

I have never seen an article anywhere that showed up the writer so well as this last quotation. If I understand this aright, it means this: Mr. Heddon has a paper of his own, with which to advance his personal interests. But would advise bee-keepers not provided with a paper to induce some poor honest editor, or gull some farmer, to help him influence his neighbors. If it does not mean this, what does it mean?

My idea is, that we ought to investigate Mr. Heddon's method of selling honey, etc. Why should he be allowed to gull beginners, if the quotations I have made are true?

Upper Alton, Ills.

Plant Lice on Fruit Trees.

I should like to inquire regarding a green louse that is infesting the under side of the leaf, and the stems of this year's growth on my plum trees, and some on the pear and apple trees. I have not seen any on the old trees. What are they, and is there any remedy?

Rochester, Mich. H. L. LINTZ.

[The insects referred to are plant lice. They are very common this year, and have done much damage. They first work on the leaves, then go to the stems of the fruit. When they are so numerous—millions upon millions—they are likely to seriously injure, if they do not destroy, the trees and fruit. Their insect enemies are now eating them, and will doubtless lessen the mischief.

The remedy is kerosene emulsion, but it should be applied early in the season, just before the leaves form.—A. J. COOK.]

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
July 30.—Carolina, at Charlotte, N. C.
A. L. Beach, Sec., Pineville, N. C.

Aug. 6.—Rock River, at Sterling, Ills.
J. M. Burtch, Sec., Morrison, Ills.

Sept. 3.—Susquehanna County, at So. Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—P. H. Elwood....Starkville, N. Y.
SECRETARY—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

Bee and Honey Gossip.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Good Yield from Raspberries.

Bees have done well here this Spring, although there has been a prolonged drouth, no rain having fallen for nine weeks, but within the last 48 hours we have had several showers of rain—just in time to save the basswood. White clover dried up, but I have taken 90 pounds of raspberry honey per colony from several colonies, and the prospects are good for a large yield from basswood, as the trees are full of buds, which will open in a few days.

J. K. RICH.

Cato, Ills., July 4, 1891.

Is it from Purple Asters?

This is not a first-class locality for honey, although white clover is good, and there is plenty of it. Black locust is plentiful here, and the blossoms are full of nectar. It blooms just before clover, and lasts about a week, but I have never known a year when the bees were able to work on it more than a day or two, on account of bad weather. Last year they worked about a day and a half on it, when a cold rain began, the blossoms were frozen, and the bees were compelled to remain in the hives. Even with uniting and feeding, I have never been able to get a hive booming full of bees by locust bloom. I produce extracted-honey, and my experience is that the bees will not go into the sections and build combs, unless there is a good honey-flow, and then they will store honey in surplus comb, if the flow is only a little more than they require. I have had Italians for fifteen years, but it is hard to keep them pure. After the honey-flow from clover is over, I take the purest queen (she is generally the best), and put her in the worst mixed hybrid colony, and give all the other dark ones capped queen-cells from this queen. By doing this every year, the bees cannot get very black. Up to three years ago I had to feed my bees every Fall, as there was no Fall pasturage, but for three years it has been getting better every year, and last Fall the brood-chambers were so full in some of the hives that I had to take some of the full frames out, and replace them with half-filled frames from other hives. I can only account for this Fall honey-flow by the fact that a swampy place about two miles from my apiary has become filled with purple asters. The honey is very dark, with a red tinge, and granulates very badly.

Lancaster, Pa. THOS. THURLOW.

Hive Covers.

If nothing else could be found that would keep the water out of bee-hives, I would use cast-iron covers, made just the same as covers or weights are made for snap flasks, except that there should not be any hole in the top, and make them a little lighter, with a flange of 1 inch on each end. Thus, you have a hive cover that will last 2,000 years, and never leak, check, nor warp out of shape, and it will not be necessary to put stones on the hives to prevent their blowing over. Cast-iron is cheap, and very durable if well painted.

Osakis, Minn. MARK D. JUDKINS.

Excellent Crop Prospects.

Bees are swarming too much, but basswood will be in bloom in a few days, and the prospects are good for an excellent crop of honey.

H. H. ROSEBROCK.

Owatonna, Minn., July 6, 1891.

No Good White Clover Honey.

Complaint is being made by most bee-keepers of the dark honey stored by bees during the past month, but this is at an end now, as a few days of cool weather has checked honey-dew completely. The honey-dew this season is very dark, of rank flavor, and quite useless. Owing to the early prospect of white clover being plentiful, great preparations were made for section honey; but, alas! those white sections are filled with honey-dew. A good article of white clover honey will be hard to find in this locality.

JNO. NEBEL & SON.

High Hill, Mo., July 3, 1891.

Self-Hivers.

I have tried Alley's self-hiver on two occasions, and it would not work. The queen went up into the top box all right, but neither she nor the drones would go down into the lower box. Mr. Alley says he will guarantee the self-hivers to hive 99 swarms out of 100, but I do not believe they will hive a dozen swarms out of 100. My bees are doing well now, and are booming on the alsike and white clovers; basswood will be in bloom in a few days, and there is a large area sown to buckwheat in my vicinity, so the bees will have good pasturage until frost comes. Bees in this part of the State wintered well, but some colonies Spring dwindled after they were taken from the cellar.

D. B. CASSADY.

Litchfield, Minn., July 4, 1891.

Honey from Heart's-Ease.

Last year my honey crop was 4,000 pounds from 60 colonies, Spring count. I put 79 colonies into Winter quarters last December, and took out 78 colonies in good condition this Spring, two of which I sold, leaving me 76 colonies, and at this date, June 30, I have 113 colonies. They have built 500 new combs, but where will they get the honey to fill them? The bees did well on fruit-bloom; then white clover began to bloom about May 1, and for a few days honey was quite plentiful, but the heavy rains commenced, the bloom increased, and the honey decreased. There was plenty of white clover, but only nectar enough to keep up swarming. I have not taken a pound of comb-honey, and very little extracted. Basswood began blooming on June 27, but it is two miles from my apiary, and only the strongest bees can fly to it. I saw an account in one of the bee-periodicals of some one having bees that would work from 15 to 30 miles away from home, and if I had such bees it would be no trouble to secure tons of honey. But there are doubts in my mind about bees flying 15 miles from home in search of nectar, or even 4 miles. Within one-half mile to two miles of my apiary, on the east, are hundreds of acres of white clover, while on the west, about two miles distant, is a grove of basswood. When the honey-flow is good from the clover, there are ten bees at work on clover to one on the basswood. The nectar being easier to obtain from the basswood than from clover, this great difference is accounted for by the distance, my observation being that from one-half to two miles is the best range of flight for bees to do good work. The prospect is good for a Fall flow of nectar from heart's-ease, if we have plenty of rain in July and August. We have had a great deal of wet weather this month. J. R. ESKEW.

Shenandoah, Iowa, June 30, 1891.

Cold Weather in Minnesota.

The weather has been very unfavorable for bees during the past two weeks—wet, cloudy and cold, with considerable wind. There was a heavy rain yesterday and last night, and this morning the mercury stands at 46°. Basswood is in bloom, but unless the weather moderates soon, the bees will gather very little honey from it. The weather is too cold for comb-building, and the bees are leaving the sections, and going down into the brood-chambers.

C. THEILMANN.

Theilmanton, Minn., July 8, 1891.

Bloom Devoid of Nectar.

This is one of the poorest years for honey that I ever knew. It promised everything, and has fulfilled nothing. I have 250 colonies in my apiaries, and, after six weeks of abundant bloom, I have no more surplus than I fed to the bees in the Spring. The season began unusually early, and now seems drawing to a close. On pleasant days the bees have been busy all the time, but they seemed to gather no more nectar than was necessary for their own use. This is the general complaint in this locality.

B. H. STANDISH.

Evansville, Wis., July 6, 1891.

Not Much Surplus.

The weather this month has been poor for the bees. Basswood bloom is just opening on the low lands. There will not be much surplus from white clover.

P. H. ELWOOD.

Herkimer, N. Y., July 8, 1891.

Useless Honey-Dew.

My crop of early honey is entirely ruined by honey-dew. I have thousands of sections of the stuff, and do not know what to do with it. It will not do to sell, as it would certainly spoil the market, even for good honey; and it will not do for Winter stores. The only way I can devise to make any use of it at all, is to extract it, and keep it for Spring feeding. I am afraid that some bee-keepers will put this stuff on the market, as it is generally capped white, and thus disgust people with all honey, and again give the old Wiley lie a great boom. C. H. DIBBERN.

Milan, Ills., July 8, 1891.

Put No Honey-Dew on the Market.

I fear the bug-juice honey, that is so plentiful this season, will ruin the market for good honey, if bee-keepers cannot be persuaded not to offer it for sale. One man told me that he had large quantities of it, and that he was selling it at 5 cents per pound. Perhaps you can, through the BEE JOURNAL, discourage the sale of the stuff, so that, if we get a flow of good honey in the Fall, there will be a market for the genuine article. G. W. COLE.

Canton, Ills.

[Yes, indeed. Let no one presume to offer such stuff for sale as honey. His reputation is at stake! The pursuit is also in danger of being sadly injured if that is done.—ED.]

Poor Prospects.

Bees began working on alsike and white clovers about June 10, and have stored a few pounds in the sections up to date, but there has been too much rain and cold, northwest winds. Basswood has been in bloom for a week, but the bees have been confined to their hives much of the time, and unless it clears up within a few days, the crop will be slim. WM. PEARSON.

Oswalt, Iowa, July 2, 1891.

Wavelets of News.

Bee and Honey Statistics.

In Greece there are 30,000 colonies, producing 3,000,000 pounds of honey; in Denmark 90,000, producing 2,000,000 pounds; in Russia 110,000, producing the same; in Belgium 200,000, producing 5,000,000 pounds; in Holland 240,000, producing 6,000,000 pounds; in France 950,000, producing 23,000,000 pounds; in Germany 1,450,000, and in Austria 1,550,000, each producing 40,000,000 pounds of honey.

Careful estimates put the number of bee-keepers in the United States at 350,000; over 10,000 of this number keep more than 500 colonies each. The value of the honey produced by them in 1889 was over $100,000,000, and the value of the beeswax produced for the same year exceeded $17,000,000.

Prevention of Swarming.

The great study of the bee-keeper is how to keep the bees from swarming. A colony sending out a swarm in the season of honey-flow, means almost entire cessation of honey-gathering in the hive for some days; and possibly no more will be stored in the sections that season. But by proper management of the swarm that goes out, one may get considerable comb-honey.

One way is to hive the swarm in frames, having only a strip of comb-foundation about one inch wide in each, which insures straight combs if the hive is level. Then place a case of sections above, and when they are about half filled, raise them and put another under, and so keep them storing honey before they have much brood to feed.—*Exch.*

Bees Cause a Panic.

KANSAS CITY, MO., June 22.—An immense swarm of bees caused a little panic to-day at the corner of Eighth and Main streets, the very heart of the business portion of the city. A wandering minstrel from Italy stopped on the corner and proceeded to grind out a choice air. The bees, which were just passing the spot, were attracted by the hum of the organ, and attempted to cluster on the Italian's head. The musician beat a hasty retreat unharmed.

The queen-bee then headed for the globe of an electric light, and her enraged subjects following, settled within and about the globe, seemingly contented in their resting place.

Then the electric-light man, making his rounds to renew the carbons, lowered the globe to the street, not noticing its strange occupants. That made the bees mad, and the crowd that had collected to see the fun, soon decided there was very little humor in the situation. The bees scattered about among the crowd, which hastily dispersed, several having been severely stung. A farmer finally came with a box and succeeded in hiving the bees and carrying them off.—*Ex.*

Shade for Bee-Hives.

I want shade over my bees, because I want it shady when I work at them.

If you have no trees over your hives you can put on a shade-board wider than the hive, and projecting on the south side. Have an inch or two of space between the shade-board and the hive.

Set your hives near the ground, say, on stands from 2 to 4 inches high. Some use four bricks—two on the back on edge, and two in front laid flat. It is well to have the back end an inch or two higher than the front. It helps the bees to clean house.

Do not allow the grass to bother the bees in front of the hive. Keep it cut short, or, better still, do not let it grow at all. Salt will kill it, or a pile of sand will do it.

Level your hives with a spirit level, from side to side.

I do not think it makes much difference which way the hive faces. Most of mine face east. The arrangement I like best is to have two close together facing east, and two standing against these, back to back, facing west—four in a clump. If you want them convenient for watching for swarms, there is no better way than to have them in a straight row; providing you have enough to make a row.—C. C. MILLER, in *Stockman and Farm.*

District Fair.

The twelfth Annual Fair of the Wayne, Henry and Randolph Counties Agricultural Association will be held at Dalton, Ind., Sept. 8 to 11, 1891. In the Apiarian Department $11 in money are offered and a year's subscription to the AMERICAN BEE JOURNAL. Joe Replogle is Superintendent.

How Bees Know Each Other.

In "Combe's System of Phrenology," page 281, the following sentence occurs: "All the animals which belong to a herd, and also all the bees in a hive, from 20,000 to 80,000 in number, know each other."

The statement in regard to bees is undoubtedly true; but when it is used to prove that bees have the organ of "Form," and recognize their fellows by its exercise, the author only proved that he knew less about bees than about phrenology.

The fact is, that bees do not drive an intruder away or kill him, because they know him to be such by his size, form or color, but because his scent (hive odor) is different from their own.

This is soon found out if we attempt to unite 2 colonies of bees without the proper preliminary manipulations known to all intelligent apiarists, for a slaughter at once begins.

A peaceful and harminous union, however, is easily accomplished if the bee-keeper first proceeds to "unite" their odor by spraying both colonies alike with peppermint water, or in some other way of his own. Bees thus prepared never fight when united.—T. GERSHAM, in the *Phrenological Journal.*

Bees Deserting Hives.

There are some cranks in the bee family as well as in the human, but as a general thing they appreciate good treatment. Bees should not be asked to help to clean out a dirty, dusty old hive and fill it with nice, clean combs. I would not do it if I were them; I would hunt up a nice, clean place in a hollow tree in the woods.

Is it not reasonable to suppose that a bee returning from the fields heavily laden, and compelled to walk a dusty, dirty floor, would get soiled? And when they unloaded get into their honey and bread.

Give swarms nice, sweet smelling hives and there will be less heard about absconding. In the days of the old gum it was fashionable to wash them out with cool water from the well and apple leaves. No doubt the bees appreciate it.

Some persons have a mistaken idea with reference to hiving a swarm. When the bees are in, they leave it until night before moving it where it is to remain. The hive may be all right, but if it stands in the sun when the scouts return, they may tell them of a cooler home, and conduct them to it.

The safest way to do when they are hived near the cluster, is to move them away where they are to remain. If the hive is not set in a shady place, it should be shaded in some way.

When a swarm has been hived and removed from the spot where they clustered, many times the scouts will be seen for hours, and even days, flying around the branch where they clustered, and telling them how mean they were to run away while they were out hunting for a home.—MRS. L. HARRISON, in the *Prairie Farmer.*

Uses of Bees.

Bees are valuable not only for their products, but because they also act as agents in the fertilization of plants. One reason why they are profitable is because they gather and store up that which would be entirely lost without their aid. They work in places that are rarely seen, and the fence corners and neglected spots are often their most valuable pastures.—*Exchange.*

Prompt Work.

I have received the sections, and I am very well pleased with them, and the promptness in which you sent them. I like the BEE JOURNAL much better since you changed the size of it to the present form. I learn something new every week from perusing the BEE JOURNAL.

Tippecanoe City, O. J. H. ROHRER.

The Cold Weather has caused the so-called honey-dew to cease, and that is a blessing.

The Honey-Bee: Its Natural History, Anatomy, and Physiology. By T. W. Cowan, editor of the *British Bee Journal*, illustrated with 72 figures and 136 illustrations. $1.00. For sale at this office.

When Writing a letter be sure to sign it. Too often we get letters with the name of the post-office, but no County or State. One such came recently, and we looked into the Postal Guide and found there were places by that name in 13 States. That order for goods will have to wait until another letter comes to give the proper address. Be sure to stamp your letter, or it may go to the dead letter office.

AMERICAN
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OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

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ALFRED H. NEWMAN,
BUSINESS MANAGER.

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☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

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We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The 7 above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
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American Garden	2 50	2 00
Rural New Yorker	2 50	2 00
Nebraska Bee-Keeper	1 50	1 35

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

◆

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the BEE JOURNAL (with $1.00 to pay for the same), or 2 subscribers to the HOME JOURNAL may be sent instead of one for the BEE JOURNAL.

◆

Clubs of 5 New Subscriptions for $4.00 to any addresses. Ten for $7.50.

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00. For sale at this office.

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

Red Labels are quite attractive for Pails which hold from 1 to 10 lbs. of honey. Price, $1.00 per hundred, with name and address printed. Sample free.

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

Binders made especially for the BEE JOURNAL for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

It is a Prize in Itself.—I have just seen the ILLUSTRATED HOME JOURNAL for June, with the Rebus and offer of prizes for its solution. As the paper, at 50 cents a year, is a prize in itself for the amount, I take pleasure in enclosing it, and if my answer to the Rebus is correct, you can place me as a contestant for the prize. H. E. LAING.

Chicago, Ills.

The Bee-Keepers' Directory, by Henry Alley, Wenham, Mass. It contains his method for rearing queens in full colonies, while a fertile queen has possession of the combs. Price by mail, 50 cents.

☞ The Union or Family Scale has been received, and I am much pleased with it. W. H. KIMBALL.

Davenport, Iowa.

We send both the Home Journal and Bee Journal for one year, for $1.35.

Very Well Pleased. — The Sewing Machine and Scales are received in good order, and I am well pleased with them. They do good work. The sewing machine is ornamental as well as useful. The scales are very handy for family use.—G. RUFF, Burlington, Iowa.

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul-brood, can be procured at this office at 25 cents per ounce, by express.

HONEY AND BEESWAX MARKET.

NEW YORK, July 10.—Demand good for extracted-honey, with sufficient supply. No comb-honey in market. We quote: Extracted—common, 70c per gal.; good to choice, 75@78c.; orange bloom, 7@7½c per lb. Beeswax: Demand good; supply limited, at 28@30c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, July 11.—Demand fair for new 1-lb. comb, at 15@16c. Extracted, 6@6½c. Beeswax, in good demand and light supply at 25c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, July 11.—Trade good in extracted-honey, with plenty of the new crop in market. New comb-honey is plentiful. We quote: Choice comb, 14@15c. Extracted, 5@8c. Beeswax is in good supply and demand at 25@28c for good to choice yellow.
C. F. MUTH & SON, Freeman & Central Aves.

CHICAGO, July 11.—Demand for comb and extracted honey not very active. We quote: Comb, 12@17c; extracted, 7@8c. Beeswax in good demand at 27c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, July 10.—Demand for honey light, with new crop coming in. We quote: Comb—1-lb. white, 16@18c; dark, 14c; 2-lb. white, 15c; dark, 12c. Extracted—white, 7@8c; dark, 5@5½c. Beeswax, 25@27c.
HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, July 11.—Demand light, and the new honey offered not very white; a fancy article of new comb-honey will sell at 17c. We quote: Comb, 15@17c. Extracted, 6@8c, as to color and quality. Beeswax: Demand equal to supply, at 28.
R. A. BURNETT, 161 S. Water St.

BOSTON, July 10.—Demand poor, supply light. We quote: Comb, 12@18c; extracted, 7½@9c. Beeswax: None in market.
BLAKE & RIPLEY, 57 Chatham St.

ALBANY, N.Y., July 10.—Demand for honey very light. Attractive new comb-honey would sell at 15@18c. Beeswax, in light supply and wanted at 30c.
H. R. WRIGHT, 326-328 Broadway.

NEW YORK, July 10.—Demand for honey, quiet, and shipments increasing. We quote: New crop, comb, 14@15c. Extracted—Florida, 7@7½c. Southern, 75@80c per gallon. Beeswax: Demand, light; supply, increasing; good stock, 29@30c.
F. G. STROHMEYER & CO., 122 Water St.

MILWAUKEE, July 11.—Demand for honey fair; supply moderate. Old-crop honey out of the way, and market in good order for shipments of new. We quote: Comb, 1-lb., 16@18c. Extracted, white, 7½@8c. Beeswax, in fair supply and dull, at 25@28c.
A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO, July 6.—Demand for honey good, and supply light. Crop late and lighter than last season. We quote: Comb, 1-lb., 12@14c; no 2-lb. in market. Extracted, 5@6c. Beeswax in light demand, and market almost bare, at 25@27c.
SCHACHT, LEMCKE & STEINER, 16 Drum St.

CHICAGO, July 11.—Honey market quiet, and shipments increasing. A fancy white comb, in clean package, will find ready sale at a high figure. We quote: Comb, 15@17c. Extracted, 6@8c. Beeswax scarce and in good demand at 27@31c.
J. A. LAMON, 44-46 S. Water St.

DETROIT, July 11.—Demand for comb-honey is slow and supply light. We quote: Comb, 14@15c; extracted, 8@9c. Beeswax in fair demand, at 27@28c.
M. H. HUNT, Bell Branch, Mich.

Lots of Replies.

During the year 1888, we had an advertisement running in the American Bee Journal, and we had the same in several Daily and Weekly papers, but to our surprise we received more than double the number of responses from the advertisement in the American Bee Journal, than from all our others combined.

The fact that we are still receiving letters referring to our advertisement in the Bee Journal, shows that it is preserved and read long after it is received. Newspapers are read and thrown aside and that ends it, but the Bee Journal is preserved, and the advertisements are often noticed and bring responses long after they appeared in it.

We regard the American Bee Journal as a first-class advertising medium.

Cedar Rapids High-Speed Engine Co.,
HENRY RICKEL, *President.*

You Need an Apiary Register, and should keep it posted up, so as to be able to know all about any colony of bees in your yard at a moment's notice. It devotes two pages to every colony. You can get one large enough for 50 colonies for a dollar, bound in full leather and postage paid. Send for one before you forget it, and put it to a good use. Let it contain all that you will want to know about your bees—including a cash account. We will send you one large enough for 100 colonies for $1.25; or for 200 colonies for $1.50. *Order one now.*

Open the hives only when it is necessary, and when it is warm enough for the bees to fly.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line,** for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

FOR SALE.—Thirty colonies Hybrid Bees, in 10-frame Langstroth Hives; all straight combs, built on foundation. Price, $4.00 per colony. Can be shipped at once. JESSE FAIRCHILD, 1241 Homan Ave., Chicago, Ills.
3Atf

THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

Our Club Rates are: $1.90 for two copies (to the same or different post-offices); and for THREE or more copies, 90 cents each.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVIII. July 23, 1891. No. 4.

Editorial Buzzings.

After the shower, the tranquil sun;
After the snow, the emerald leaves;
Silver stars when the day is done;
After the harvest, golden sheaves.

◆

Six Centuries Ago the Swiss Republic was created, and on the 19th inst. the Swiss inhabitants of Chicago celebrated that anniversary. Ex-Mayor Harrison was called upon for a speech, and it is wonderful how the partaking of some honey before he started to address them, woke up his energies and sweetened his speech. Here is an extract from his "honeyed words," as given in the *News* on the following morning:

> There are two spots on the map of the Old World which are dear to every lover of freedom. One is Greece, the other Switzerland. This very day I have eaten of the honey of Hymettus, the honey of which Homer sung 3,000 years ago. It was sent me by a lady living in Greece. Another friend sent me some olives, grown on the Athenian hills. To-day I have eaten the honey and olives of Greece, and now I am reveling in edelweiss, and talking to Swiss freemen.
>
> He went on to eulogize the brave men who have maintained Swiss independence, told the story of Tell and Gessler, and lifting a corner of the American flag at his right, told his hearers to be good citizens, and stand up for the stars and stripes, so that Switzerland will be proud of her children in this new and greater republic.

◆

Bee and Honey Exhibits.—We have received a letter in relation to bee and honey exhibits at fairs, and would refer the writer to an article on that subject appearing on page 70 of the BEE JOURNAL for Jan. 15, 1891, and to "Facts Concerning Bee-Keeping," on page 16 of the BEE JOURNAL for July 2, 1891. Should any of our friends have any further points or suggestions to offer on this subject, we will cheerfully publish the same. Here is the letter:

> Will some of the able contributors to the BEE JOURNAL write an article to be read before agricultural societies, to induce them to be more liberal with bee-keepers, as regards space, premiums, etc. In this part of the country, it is a hard matter to secure space enough to make a creditable exhibit without paying an exorbitant price. I think that if we had something to start them to thinking, and show the indifference exhibited toward our industry at county fairs, it would be a step in the right direction, and the sooner it is taken, the better. If you will kindly publish this, and any articles on the subject, in the BEE JOURNAL, you will greatly oblige the undersigned, and many others.
>
> Myrtle, Ont. IRA J. DEBOYES.

◆

World's Fair.—Some 24 foreign nations have now officially accepted the invitation to participate in the World's Columbian Exposition. Russia, Turkey, Denmark, Persia and Egypt are among the recent acquisitions. Thus far an aggregate of $2,695,000 has been appropriated by 29 States for representation at the World's Fair.

Canton, Ills., is still stirred up about Mr. Cole's bee lawsuit. In the Canton daily *Register* we notice that he has advertised to sell his bees very cheap to some one who will move them away.

The *Register* also copies from page 41 of the BEE JOURNAL, our remarks on the case, and in the next column charges the Mayor and Aldermen with inefficiency for not attending to their duties in keeping the city clean, and averting a threatened calamity in the form of epidemic diphtheria and scarlet fever. Here is an extract from the article, and it shows how unpopular the Mayor and Aldermen are at home:

> But here in Canton......physicians report cases of contagious disease to the Mayor, who sends the City Marshal to tack up a notice on the infected premises, and that is all. Is it any wonder that diseases getting a foothold here retain it? Is it not a wonder that before this time scarlet fever and diphtheria both have not become epidemic?
>
> If the epidemic finally comes......the *Mayor and Aldermen* of Canton, and the *Mayor especially*, will richly deserve the execrations of a community, the interests of which they seem to forget that they ever swore to serve.
>
> A year ago, when the *Register* voiced the demand of the people of Canton for a rigid sanitary ordinance, and an efficient Board of Health or Health Officer to attend to its enforcement, Mayor Maple promised that such an ordinance should be speedily prepared and presented to the Council. He prepared the ordinance, but it was never presented. Mayor Maple considered further—and pocketed it. This may, or may not, have been in order that His Honor might pocket also the $200 which he claimed, and was allowed at the close of the year, for maintaining a vacancy in the position of Health Officer for twelve months.
>
> The *Register* desires to inquire of the Mayor and Aldermen of the City of Canton, whether there must be an epidemic or a hanging before the health of this community can be as well protected as that of others?

Perhaps these officials have been too busy persecuting Mr. Cole to be able to attend to their official duties.

Illinois Bee-Keepers should read carefully the following letter, and immediately state their views on the proposition made by Mr. Jas. A. Stone. We heartily endorse the idea. A conference should be had at as early a date as possible, and the time and place suggested will probably be as good as any that can be arranged. Let all who are interested be heard from at once. Here is the letter:

> I am decidedly in favor of the proposition made in the BEE JOURNAL of July 9, on page 40, under the heading of "Illinois Bee-Keepers." We always have a meeting of the bee-keepers at our fairs, and the Honey Department is their headquarters.
>
> Now, if some particular time can be named which will be understood by all, there will be without doubt a good representation, and no better opportunity could be had for arranging a programme for the annual meeting. And if it is thought proper, a place for meeting in the city will be arranged for.
>
> I will suggest that our President, P. J. England, name the time of meeting at the Springfield Exposition, Sept. 7 to 11, and that it be as early as Wednesday, in order that if necessary our meeting can be adjourned to the city at a later day, or have time for extended meetings at the fair.
>
> I believe that the bee-keepers of our State ought to show, in the best way they can, their appreciation of what our last Legislature did to advance our interests, for upon the manner in which we treat what has been done, depends what we may yet hope for in the future.
>
> So if we do not obtain what we want in times to come, we will only have to look back to the present and condemn our inaction. JAS. A. STONE.
>
> Bradfordton, Ills., July 16, 1891.

Leininger Brothers, of Fort Jennings, O., have sent us a cage of their yellow bees. They are really beautiful, large, and well-marked. They say that these bees are the progeny of an untested queen which they mailed to Douglass, Ohio. They may well be proud of their stock, for they add: "Most of our queens reared this season produce bees with 4 or 5 golden bands."

WORK AND PLAY.

E. H. DIEHL.

Meand'ring through a shaded field,
One Spring-like morn in early May,
I 'spied two gophers, half concealed,
Upon the grass in guileless play.

They ran, with almost breathless speed,
Around a clump of cherry trees,
Among whose fragrant blossoms flit
A countless swarm of honey-bees.

They stopped a moment, stood erect,
With forefeet pendant on their breast,
In studied effort to detect
Approaching danger to their nest.

One moment more, a trampling sound
Apprized them of the approaching foe,
And quick as thought, into the ground,
Their little striped forms they throw.

The busy bees still worked and sang,
Intent on earnest labor done;
While all the woods with music rang,
Beneath the brightness of the sun.

Those idle gophers! where are they?
Secluded in their cozy den,
To while an hour or two away,
Then slyly to come forth again.

What lessons have I learned to-day,
From Nature's bright, enchanting scene?
That earnest work and idle play,
In all God's kingdom may be seen.
Leeseburgh, Ills.

Queries and Replies.

Disposition of Swarm to Prevent Increase

Query 776.—Which is the best way to prevent increase, to return the swarm to the parent hive, or unite it with a weak colony?—W. S.

It depends on circumstances.—C. C. Miller.

Unite it with the weak colony.—J. P. H. Brown.

Neither; but of the two, the latter.—James Heddon.

There would be no increase either way.—R. L. Taylor.

Return the swarm, remove the queen, and destroy all the queen-cells but one.—M. Mahin.

That depends upon the kind of a swarm. I should return all but the first.—Mrs. L. Harrison.

That depends upon circumstances. I could best determine if I was upon the ground.—J. M. Hambaugh.

It would depend on circumstances. I have united a swarm with a weak colony with good success.—H. D. Cutting.

The most profitable way to prevent increase is by the new system of management described in my book.—G. L. Tinker.

Either way will prevent increase, but it is difficult to find a weak colony at swarming time, unless it be a queenless one.—Dadant & Son.

To return, if managed well, will succeed; and to give to a weak colony, after removing the queen, succeeds with me in nine cases out of ten.—A. J. Cook.

Remove the queen from the weak colony, and shake the bees out on a sheet in front of the hive, then dump the swarm on the sheet, and let them all run in together.—C. H. Dibbern.

If you have weak colonies, build them up that way, but one queen should be removed. Swarms returned to the parent colony will not always "stay put."—Eugene Secor.

If you are working for comb-honey, and try either plan, I think it will result in vexation of spirit. Prevention of increase and comb-honey do not work well together.—G. M. Doolittle.

It will depend upon the condition of the apiary. If it is desired to build up the weak colony, unite. If returned to the parent hive, the chances are that a swarm would soon issue again.—J. E. Pond.

Take away the brood, and put empty combs, or frames with foundation, or starters only, in their stead, and hive the swarm back where it came from. The brood may be given to weak colonies if you have them, but if not, put a queen-excluder on the brood-nest over the swarm, and put the brood in a super or hive body, and tier up on the queen-excluder. This forces the queen to commence anew below the zinc excluder, and if the queen is not old, or otherwise objectionable to the bees, there will be no more swarming, and you will have a rousing colony, able and willing to store all the honey in sight.—G. W. Demaree.

Topics of Interest.

Rapid Increase to Preserve Combs.

G. M. DOOLITTLE.

A correspondent writes thus: "I lost four-fifths of my bees last Winter and Spring. What shall I do to preserve the combs, and how can I increase the few remaining colonies so that they will again take all the combs? Please answer through the AMERICAN BEE JOURNAL.

As I propose to answer the first question by telling how to do the latter, I will dwell on the first only long enough to say, that if the bees are so reduced that they cannot possibly be multiplied so as to use all the combs left by those which have died, the only thing to do is to fumigate them with burning sulphur every two or three weeks during warm weather, unless you have some moth-proof room, in which you can place them, after fumigating twice—which should have two or three weeks intervening between the times, so as to allow all eggs to hatch.

The hanging of combs two or more inches apart cannot be depended upon, as I have had quite a number of combs destroyed in trying that plan. I am sorry that this question could not have arisen a little earlier, for by the time it comes before the readers it will be rather late; but perhaps it will be in time for those in the extreme North, and those in the South can preserve what they wish of it for another year.

The main question before us, then, is how to increase the few remaining colonies as much and as early as possible. As nothing can be gained by trying to increase colonies until some of them have their hives full of bees and brood, I advise all to wait until at least *one* is strong, before trying the plan. When you have such a colony, and desire to proceed, make a box which will hold about six quarts, having two sides covered with wire cloth, one of which is to be removable, so that the bees can be shaken out of the box when desired.

Besides this box you will want a large funnel, such as is used in putting up bees by the pound, a hole being made in the top of the box for the funnel to go into, and some means provided for shutting this hole after the bees are in. In addition to the strong colony, it will be necessary to have one other fair colony, and if any do not have such a one, I should advise the purchase of one, or a pound of bees with a queen.

Having 2 colonies, such as is referred to, I proceed to the strongest and get a pint of bees which are caused to fill themselves well with honey before they are shaken down through the funnel into the box; and it is also very essential that you are sure that you do not get the old queen with these bees. These bees are now placed in a dark, cool place and left for four or more hours, until they are very "hungry" for a queen, when the queen from the weaker colony is given to them, and the bees and queen left in the box until the next morning.

A frame of brood is now taken from the weaker colony and a frame of honey from the stronger, when both are placed in a hive, and the little swarm from the box hived on these combs. The colony from which you took the queen is now allowed to build queen-cells, which should give better queens.

As soon as the first cell is sealed, you are to form another little colony in the same way, and from the same full colony as before, also using the same queen to form it with; when in 48 hours, this first cell which was sealed, should be given to the little colony, using bees each time from the strong one, and the same queen to form each colony with. In 48 hours a cell is given to the second little colony, and thus we keep on forming little colonies as long as we have cells or virgin queens to give them; for if the cells are not all used up when it is time for the first young queen to hatch, all but one (which should be left for that colony) are to be cut out, and placed in a queen nursery, so that we can use virgin queens instead of cells.

If we were successful in getting a good lot of cells, we shall have, at the time the last virgin queen is used, from 10 to 12 colonies of bees, into which we now begin to place the combs we wish to keep the moths from. I forgot to say, that, after making the first little colony, a comb should be placed in the strong colony in place of the frame of honey taken from it; and that for each succeeding colony formed, this comb, now having a few eggs in it, is taken out and another put in its place, while the frame of honey should be taken from those you wish to preserve from the moth.

In putting the frames of comb in the little colonies, I place them beyond the division-board until the queen gets to laying, when, one by one, they are placed in the brood-nest, as the colony gets strong enough so the queen will fil them with eggs. The bees will care for the combs as regards keeping the moth from them, just as well beyond the division-board as they would if no division-board were there.

When the last little colony is made I use nearly three times the bees in making it, and give, when hiving them, two or more frames of hatching brood, so that in a week or so I may again have a fair colony to rear queen-cells from—for, at the expiration of about two weeks the same operation is to be repeated, and 8 or 10 more colonies formed.

Again, in two or three weeks, or as soon as the original strong colony is in fine condition, more are formed; but as it grows later in the season, a quart or more of bees are taken to form the colony, instead of a pint. Finally, as Fall draws on, the first formed little colonies are strong enough to spare bees. At this time I take bees from 3 or 4 colonies, thereby getting bees enough to make a good, full colony at once.

By the above plan it is easy to build up a depopulated apiary again, especially if you are willing to feed liberally when honey is not coming in from the fields; and I believe it is far cheaper than to buy bees by the pound, and queens to be put with them, as many do.

Borodino, N. Y.

Arrangement of Hives and Buildings.

W. Z. HUTCHINSON.

In a small apiary, the matter of arrangement is not of great importance; but as the number of colonies begins to approach a hundred, the question of arrangement becomes one of considerable moment. Two things need consideration—the convenience of the operator, and the giving of such an individuality to each hive that each bee can readily distinguish its home.

Before discussing these points, it might be well to say a few words about the location of the apiary. First, it ought to be some distance from the highway. What this distance should be depends upon what there is between the bees and the street. If there are buildings or trees, or even a high fence, the bees may be quite near the road, as, in their flight, they rise above these obstructions, and thus pass over the heads of the passers-by.

If there is nothing between the apiary and the highway, the apiary ought not to be nearer the street than 10 rods, and 15 or 20 rods would be better. It is possible, with a small apiary, to avoid trouble, even if it is located quite near the street. If it is necessary to handle the bees when no honey is coming in, and the handling is likely to irritate them, such work can be done just before dusk, when the bees will not fly far from the hive; but in a large apiary there is too much work that must be done when the bees may not be in an amiable mood to enable the operator to perform it during the twilight of evening.

If necessary, the bee-keeper can protect himself with a veil, and, armed with a smoker, he can go on with the work, even if the bees are a little "cross," but the apiary must be isolated.

Nearly level ground is preferable for an apiary. If it slopes gently to the south or east, so much the better. It should never be in such a location that water will stand upon the ground.

I have tried placing the honey-house in the center of the apiary, and having the hives in long double rows, that radiated from the honey-house as the spokes in a wheel radiate from the hub. In each double row a space large enough for a wheelbarrow is left between the rows, and the entrances of the hives are turned away from the path left for the operator and his wheelbarrow.

So far as reducing the labor of going to and from the hives is concerned, this arrangement is excellent, but it has the very serious objection that only part of the apiary can be seen at one glance from the honey-house. In watching for swarms it is necessary to look in *four* different directions in order to ascertain if a swarm is out. When the honey-house is at one side of the apiary, the whole apiary can be taken in at a glance.

Other things being equal, the south side of the apiary is preferable for the honey-house. In looking for swarms the bee-keeper does not look toward the sun, but has the clear northern sky for a background, while the shady side of the building, which will be naturally sought by the tired bee-keeper as the best spot in which to take a breathing spell, is toward the apiary.

It is universally admitted that it is best that the honey-house be upon the side of the apiary, and most bee-keepers are in favor of having the building two stories high, using the upper story as a store-room for hives and fixtures, the lower story for work-shop and honey-room (the latter being partitioned off by itself), and the cellar under the building for wintering the bees. The usual mistake in making such buildings is in not having them large enough.

The honey-room ought to be located in the southeast corner of the building, and the walls made of some non-conductor of heat. Some even paint the outside of the building some dark color where they come over the honey-room, in order that as much as possible of the sun's heat may be absorbed. The idea is that the honey must be kept as warm as possible.

If there is any unripe or unsealed honey, this high temperature causes evaporation and improvement. By keeping such a room warm with a stove in Winter, honey has been kept over until another year, and actually improved by the keeping.

But to return to the arrangement of hives. When the honey-house is at one side of the apiary, the hives may still be arranged upon the radiating plan, by having them radiate from the honey-house door, thus forming one-half of a large wheel instead of the whole of a small one, as in the case of having the honey-house in the center. Where the radiating rows are very long, they must be very far apart at the outer ends, or else very close together at the inner ends. To remedy this, shorter rows, or "spurs," are put in between the rows at the outer ends.

Another arrangement is that of placing the hives in a hexagonal manner, each hive being the center of six others. I see no particular advantage in this arrangement.

Still another arrangement is that of placing the hives in circles. The entrances of the hives in the inner row are turned toward the center, while those of the outward row face outward. This leaves the space between the two rows compartively free from bees, and the operator can work in this space without annoyance to himself or to the flying bees.

If the two circles do not permit sufficient room, more and larger circles may be added, or there may be two sets of circles, or three sets, arranged in the form of a triangle, or even four sets, and arranged in a quadrangle.

In all of the large apiaries that I have visited the hives were arranged in straight, single rows, like the squares of a checker board, the entrances in some instances facing the same way, when the hives were from six to eight feet apart. I would prefer to have the hives nearer together each way, and have the entrances of each alternate row turned toward the east, and the entrances of the hives in other rows turned toward the west.

This would leave each alternate passage-way comparatively free from bees, and the operator could work here without the bees bumping their heads against his. I would have the entrance to every hive face either east or west, because I wish to shade the hives with a light board 2 by 3 feet in size, laid over each hive, and projecting towards the south, and this projecting board would be in the way of the flying bees if the entrances were upon the south side. When the hives are arranged in rows radiating from a common center, I always turn the entrance of each hive so that it is either east or west.

There is no necessity of placing hives further apart than is requisite to afford sufficient space on all sides for the operator. Bees do not locate their hive so much by the distance that it may be from other hives, as they do by its surroundings, and these surroundings are usually other hives.

To illustrate: Let the end hive be removed from a long row of hives, and the bees belonging to the removed hive will almost unhesitatingly enter the hive that has *become* the end hive in the row. Two hives may stand side by side, perhaps almost or quite touching each other, and each bee has no difficulty in distinguishing its own hive. In a row of three, four, or even five hives, the same might be said; but when the number goes beyond this, there is a little uncertainty about the matter.

When their hives are in long rows, some bee-keepers arrange them in groups of three or five in the row, leaving a wider space between the groups than there is between the individual hives composing a group. Arranging hives in circles gives a greater individuality to each hive than can be secured in almost any other arrangement—that is, if the entrances are faced directly into or out of the circle; but my objection to this plan is that it interferes with the proper use of shade-boards.

The greatest objection to any uniformity of arrangement that makes it difficult for the bees to "mark" their location, is that queens may enter the wrong hive on their returns from their "wedding trip." With my method of management, in which the hive containing the young queen is given a new stand to prevent after swarming, *a la* Heddon, this difficulty is easily remedied by placing the hive in some location that is easily marked—the end of a row, for instance.

When this cannot be done, the hives containing unfertile queens may be marked in some conspicuous manner that will easily enable the queen to distinguish her own hive. I believe that where foul-brood is in an apiary, this regularity of arrangement leads to a greater danger of spreading the disease by bees from infected colonies entering some other hive by mistake.

In queen-rearing, it is important that the small hives containing the males be scattered about promiscuously; the greater the irregularity and oddity of arrangement, the less will be the loss of queens from their entering wrong hives. But in a large apiary, managed for honey, it is doubtful if there is a better arrangement than that of placing the hives in rows; and it seems to me that a little is gained, and nothing lost, by having the rows radiate from the honey-house door.—*Country Gentleman.*

Experience of a Beginner.

J. E. PRICHARD.

I bought the only colony in a movable frame hive in this vicinity, and when I opened it this Spring during apple bloom, one-half of the bees were drones, and also about one-half the brood was drone brood.

I killed quite a lot of the drones, and cut off the heads of over half of the drone brood, and in doing so I cut the heads off of some of the worker brood, and the remainder I placed on top of a colony in a box-hive, under the cap, or super, and the bees fed and reared them nicely.

I did not see the queen. Perhaps I killed her in removing the frames, as they were very crude affairs, and had not been moved for 2 or 3 years.

I opened the hive again in about 3 or 4 weeks, and finding no brood, no eggs, no queen, and only a little honey, I purchased a queen and introduced her on June 10 or 11, and now have three frames of sealed brood, with three frames of brood hatched out—as nice a colony as any apiarist could produce in so short a time. But it seems to me the older apiarists speak in riddles often; for instance, when speaking about feeders and queen-cages being introduced over the cluster on the frames. I do not know about the feeders, but the cage is ¾ of an inch thick, and as the space above the frames is only ¼ or ⅜ inch, how are we to replace the cover? I laid the cage down and got some ⅝ strips and tacked on the upper edge of the hive, thereby making room.

I bought six dovetailed hives complete, and filled them with foundation this Spring, expecting to have at least four swarms, as the box-hives are full to overflowing, but not a swarm, and when I go out to the bee-shed and see them loafing around, I feel like kicking them over (and I dare do it, for I have a Globe veil and a Bingham smoker and plenty of pluck), but will wait a little while.

If I only had them in my movable frames, I would stop that loafing. I am well pleased with the prospect of my Italian queen. She is a "daisy."

Port Norris, N. J., July 9, 1891.

Getting Bees to Work in the Sections.

DR. C. C. MILLER.

The following questions came from H. Hine, of Sedan, Ind.:

> What is the reason that bees will not store honey in the surplus boxes (which were put on new), when swarms will fill the brood-frames in less than three weeks? What can I do to build up a weak colony at this time of the year?

In reply, I would say that as long as there is plenty of room in the brood-chamber, bees do not care much to go off some distance from what is really their home, to store the provision that they expect to use in the brood-chamber.

You may, however, hold out sufficient inducement to get them to work in the surplus apartment much sooner than they otherwise would do so. If you put a bit of drone-brood, or even worker, in the surplus apartment, the bees will promptly go up to care for it, and then if they do not store surplus there, you may be pretty sure they have no surplus to store.

Generally it will be sufficient to put into the super a section that has been fully or partly worked out into comb, such sections being often left over from the previous year. After you have succeeded in getting one colony to working in the super, you will find it work very nicely to take partly-filled sections from the super where the bees are at work, bees and all, and put it in the super of a balky colony. See how soon they will go to work; always provided that they need the room to store.

There is no little difference in colonies about commencing work in the supers. Some will fill their supers nicely, leaving abundance of empty cells in the brood-combs while they are at work in the supers, while others will leave the supers unoccupied, and cram the brood-combs full, and build burr-combs in all directions.

To build up a weak colony at this time of the year requires no great skill. If they can get enough stores from the field to build upon on, they only ask to be let alone. Possibly, however, you want to know how to make them build up faster. Well, you can give them help from the stronger colonies. But do not make the mistake of thinking that you can take from the strong and give to the weak, and thus increase your crop of honey, if that crop comes from anything as early as clover or linden. Better, in that case, take from the weak and give to the strong.

But if you want to have more colonies to work on a late crop, or if your object is to multiply colonies, without regard to the honey crop, then you may do well to help the weaklings. You may do it either by giving them young bees or brood.

Shake the bees off of a frame (or several frames) in front of a hive to be strengthened, and all bees young enough will remain with the colony where they are shaken.

On the whole, it may be more satisfactory to strengthen them with brood. Take from the strong colony a frame of brood which is nearly all sealed, and give to the weak one, but be sure that they have bees enough to care for it. When the weather is hot, a very few bees will care for several combs, for if the brood is all sealed, it will take care of itself pretty much. Look out for cold nights, though, and have all tucked up warm.

Marengo, Ills.

Apicultural Notes from Nebraska.

J. M. YOUNG.

The basswood bloom was of short duration in this vicinity, consequently but little honey was obtained from it.

By using the Porter bee-escapes, all the bees have left the combs in 24 hours with me. I find that they will leave honey-boxes much quicker than extracting combs. I shall use a number of them this Fall and next year. Too much cannot be said in their praise.

I seldom remove the cases from the hives that hold my honey-boxes, but allow them to remain on all Summer. I keep close watch, and whenever any sections are filled, they are taken out and empty ones put in their places.

Separators are not used in my apiary, but from the number of thick, uneven sections of honey this year, it seems that they will be a necessity next year.

Fifteen hours a day, for the past month, would be a fair average in my apiary and grounds for a day's work, besides keeping up my correspondence by lamp light.

My apiary numbers now 82 colonies, including swarms. Most all of the swarms are domiciled in new, dovetailed hives.

Plattsmouth, Nebr., July 16, 1891.

Discovery of the Cause of Foul-Brood.

WM. M'EVOY.

My first experience with foul-brood was in the Spring and Summer of 1875. In April of that year one of my colonies swarmed out, and about two-thirds of the bees got into another colony before I got the hive closed. I then put the remainder of the swarm and its queen back into the hive they came from.

Then, about sundown, when the bees had settled for the day, I examined the colony, and found plenty of both brood and honey, but a very small cluster of bees—too small to cover or care for all the brood—and if the bees that got into the other colony had been in the hive there would not have been any more than enough bees to cover and care well for all the brood.

In 1881 I wrote up my discovery and cure of foul-brood and mailed it to *Gleanings*, but it was not published.

In January, 1884, I wrote up the cause and cure of foul-brood for the *Canadian Stock Raisers' Journal*, where it was printed.

I thought I was all alone in the world on the *cause* of foul-brood, and never read or heard of Mr. C. J. Robinson or any other ever having discovered the *cause* of foul-brood until I read his letter in the AMERICAN BEE JOURNAL of Nov. 1, 1890. I will use that letter wherever I go to prove that I am in the right on the *cause* of foul-brood.

I never scalded or boiled, or advised any bee-keeper to scald or boil, any hive that foul-brood had been in. It is what is fed to the brood that causes foul-brood, and not the empty hive. My experience is that the empty hive never—*no, never*—gave the disease to any colony of bees.

I have found the disease in 19 counties and 3 cities in Ontario. In all about 600 colonies had foul-brood, and I burned 10 colonies out of the 600, and those 10 would not have burned, but the owners would not do anything but sell the diseased colonies to ruin some one else, so I had to burn them according to law. I have been in the bee-business 26 years. It is my only business, and has been for many years.

I never saw a copy of the *Kansas Bee-Keeper*, and only saw a few copies of the *Bee-Keepers' Exchange* just after it started, and never saw or heard of Mr. Robinson's discovery until I read it in the AMERICAN BEE JOURNAL of Nov. 1, 1890. I would not do such a small thing as even try to claim another man's discovery. I discovered the cause in 1875, but I do not care to take any credit for the discovery. It was not for the sake of claiming to be the original discoverer of the cause that I wrote what I did in the Official Bulletin. I wrote that in the bulletin to show the bee-keepers that foul-brood was *caused by the rotting of uncared-for brood, and that that was the whole, sole, real, and only cause* of foul-brood.

Woodburn, Ont.

Some Facts Concerning Honey.

HENRY BEATTY.

The honey harvest has come once more, and there are a few facts in connection therewith that should not be overlooked.

Sugar and water are the principal constituents of honey. Upon them, and the temperature, depends its density. One pound of water at 55° F., will dissolve about two pounds of sugar (it depends somewhat upon the purity of the water and the quality of the sugar).

In a higher temperature it will dissolve more sugar, but if the temperature falls below the point where the water is saturated with sugar, part of the sugar will granulate, and continue to do so until the water contracts to its maximum density (39° F.).

If bees gather honey when the temperature is high, and the air not being saturated with moisture, due to its temperature, much of the water is evaporated before the bees collect it, and it will granulate in a higher temperature (under the same conditions) than that which is gathered when the air is saturated with moisture.

"If the adhesive attraction between the solvent and the dissolved solid can be overcome, cohesive attraction resumes its sway, and remits the molecules of the solid. This change may be effected in various ways, as, when the solvent is removed by evaporation, or when another liquid, having no chemical effect upon the solid, is mixed with the solution. When a solution is evaporated, the solid is deposited, either during the process, or remains at its close."—Youman's Chemistry, page 34.

Thin extracted-honey, placed in a room where the temperature is high, and with but a small surface exposed to the air (to "ripen") is decidedly bad. It will deteriorate in quality, while it will receive but little if any benefit from evaporation.

"Four causes influence the rapidity of the evaporation of a liquid: 1. The temperature. 2. The quantity of the same vapor in the surrounding atmosphere. 3. The renewal of this atmosphere. 4. The extent of the surface of evaporation. Increase of temperature accelerates the evaporation by increasing the elastic force of the vapors. In order to understand the influence of the second cause, it is to be observed that no evaporation could take place in a space already saturated with vapor of the same liquid, and that it would reach its maximum in air completely freed from this vapor. It, therefore, follows that between these two extremes the rapidity of evaporation varies, according as the surrounding atmosphere is already more or less charged with the same vapor."—Ganot's Physics, page 283.

If comb-honey is placed in a high temperature, the water in the honey will expand and break the cappings. Hence, fermentation takes place.

"When the sweet juice of fruits or plants is exposed to the air at the temperature of 70° or 80° F., in the course of a few hours, a change commences; small bubbles, consisting of carbon dioxide, rise to the surface, the liquid becomes turbid, and begins to ferment, or, as is commonly said, 'to work.' After a time the bubbles cease to rise, and the liquid is no longer sweet, but has acquired a spiritous taste."—Youman's Chemistry, page 304.

The best way to take care of extracted-honey is to put it in tight packages, in a cellar or cool room, and invert the packages every ten or fifteen days, to keep the sugar from settling to the bottom. The sugar being heavier than the water, will settle to the lower layers of the water and granulate.

Comb-honey should be kept in a dry, cool room.

Massillon, O., July 6, 1891.

Transferring Bees from Box Hives.

GEO. E. HILTON.

I frequently get inquiries in regard to transferring bees and combs from one size of frame to another, or from old boxes and other receptacles, into movable frames, and as the season is approaching for that kind of work, a few thoughts and suggestions may be timely.

WHEN IS THE BEST TIME TO TRANSFER?

I know of no better guide than the blooming of the apple trees; this, as a rule, means settled warm weather; a little honey is coming in at this time to assist the bees in patching up the broken combs; there is but little honey in the hives, which makes the combs easy to handle; there is considerable brood in all stages that will help to replace the loss—which is only temporary, and is soon overcome by the extra exertions the bees will put forth, for they seem to appreciate their new and better quarters, and show their appreciation by doubling their energies.

HOW TO TRANSFER.

Transferring from an odd-sized frame to a standard is an easy matter, especially if the old frame is the larger. For convenience we should have a table near the place of operation, and this should be covered with an old quilt to protect the brood. Move the old hive by your side in a convenient position, place the new hive on the old stand, give the colony a moderate smoking, and lift out one of the frames, brush all the bees down in front of the new hive (which should be arranged so they can run in readily).

You should have some string, such as they tie up merchandise with, cut in pieces long enough to go around the new frame and tie at the top; lay about three or four of these on your table in the length of your new frame; now lay your old comb directly on these strings, and with a thin, sharp knife cut the comb loose from the old frame. If you keep your knife in a pan of hot water, it will work all the better.

If your new frame has a comb guide in it, I should remove it. Now, lay the new frame on the comb, and with your knife cut the comb so that it will fit closely against the top and bottom bars, and as near as you can endwise. If one comb will not fill the new frame, use as many as needed.

You need not be particular about fitting the pieces together; the bees will fix that better than you can; some of the best combs in my yard were secured in this way; you see it makes a full frame of comb from top to bottom, and end to end, and for extracting purposes they are the best. Now you have only to continue this operation until all the combs are transferred, or your new hive is full, hanging the new frames in the new hive after tying the strings tightly at the top.

As soon as the combs are securely fastened in the frames, the bees will gnaw the strings in pieces, and drag them out, making you no further trouble. A few bees will be left in the old hive; these will not fly, but should be scooped out with a thin shingle, a piece of pasteboard or something, the hive well smoked and moved away, and the work is done.

In transferring from box-hives the operation is a little different in the beginning, but the latter part the same. First, smoke the bees in the box, then turn it bottom side up at your side near the table.

You should have a rough box about the size of your box-hive; place this over the inverted bottom, and gently rap on the sides of the box-hive for about five minutes, and the greater part of the bees and queen will go into this upper box. They can be set to one side, and will be out of your way, otherwise they keep going to the further side of the hive, and at last you have a mess in which you may lose your queen.

Now, remove the side of the hive that is the nearest parallel with the combs in the box, cutting the combs loose that are attached to the side, set your box-hive right on the table, loosen the first comb at the bottom as it now stands first—and here you will appreciate your hot knife—then the two sides, and let it tip over on the table.

In box-hives you will find considerable drone-comb. This should first be cut away and thrown into a shallow pan, then lay your frame over the comb and cut and tie as before, hanging the frames of comb in the new hive that has been placed on the stand where the box-hive stood. Repeat this operation until you have filled your frames from the best comb in the old hive.

You will now have a lot of scraps of comb left, containing more or less honey; these should be placed in a shallow pan, and placed in the upper part of the hive on top of the frames, leaving a small hole at the back end of frames for the bees to come up. They will soon find it, and carry it below where it will be of value to them. Cover or close the top of the hive tightly, shake the remaining bees from the old box down in front of the hive, also those in the box you used to get them out of the box-hive, and the work is done.

After the bees have cleaned out the refuse combs, you have a nice lot of comb to make into wax. This should be attended to at once, as it is valuable, and becoming more so every year. We have wax extractors, but if you do not care to purchase one, you can put all your comb into a stout porous bag—burlap is good—place a piece of board in the bottom of your wash boiler, put in your bag of comb, and place a weight on this to keep it under water.

Fill your boiler with water, and boil it for an hour or more. Turn the bag over occasionally, and when done, set the whole thing off to cool. When cool you will have a beautiful cake of yellow wax on top of the water. You cannot burn your wax in this way. You can remelt and cake in any form you desire.—*Michigan Farmer.*

Fremont, Mich.

Summer and Fall Management of Bees.

C. J. ROBINSON.

In most sections of the temperate zone, July is, for bee-culture, the deciding month—stamping the character of the year either as good, middling, or bad. It is the real "harvest moon" of the bees. The colony which is to prove profitable to its owner, must gradually diminish the amount of brood it contains, and direct its energies chiefly to the accumulation of stores. This is, indeed, the habit of the bees, though they sometimes fail to observe it.

Should the weather be moist, and hence better suited to foster brood-rearing than honey-gathering, the queen will continue to lay eggs freely, the larvæ will be carefully nursed, and even drone brood regarded with favor. Then, if pasturage suddenly fails, the cells vacated by the maturing young will remain empty, and the approach of Winter will find the colony illy prepared to endure the long confinement that awaits them. The bee-keeper should endeavor by all possible means to obviate such results. His policy and his management must be regulated according to the weather prevalent during the month. If it be dry, and permits the bees to gather honey plentifully, his main concern will be to furnish them with room for garnering their stores, by giving them access to surplus cases, and placing supers on his smaller hives.

But if his bees are in movable-frame hives, he can best aid them and secure his own interest by removing some of the full combs and replacing them with empty ones; thus saving them the labor of building combs, and enabling them to direct all their energies to the gathering of supplies.

The rapidity with which they can gather honey must determine the quantity which may be taken away; and while the pasture continues good, they will only labor the more assiduously if empty cells be constantly within their reach. This serves, in reality, to stimulate their industry; whereas, when they are conscious of possessing an abundance, they are apt to remit their exertions, and cease to labor with an activity proportioned to their numbers.

The rapid gathering of honey necessarily tends to restrict brood-rearing because the cells are supplied with nectar as soon as the young bees emerge, and the queen has none, or few, in which to deposit eggs.

If I understand Mr. Doolittle, he claims to possess bees which have reasoning faculties, special instinct, or habit, or he has educated them to do wonderful things in the line of breeding early in the season, and up to the time when the honey harvest is ready to boom—then the queens take a Summer vacation (?).

Of course a strain of bees possessing the merit claimed by Mr. D., should take the lead in the queen market, over even that really most meritorious race of bees—the Alpine Carniolans.

If the weather be warm and wet, and pasturage scarce, the bee-keeper must endeavor to check brood-rearing as much as possible. It is better that bees—especially young colonies—should be constrained to fill a limited (small) space thoroughly with comb and stores, than that they be permitted to expend honey in extending downward, or on numbers of frames, the combs which would probably remain in large part empty in the Fall. They have need of the honey in Winter, and the empty combs could be of no service to them then.

The most effectual means, however, of arresting brood-rearing at this season (unless the very amiable or learned queens of the Doolittle stock are the breeders), is found in the confinement of the queen, or her entire removal, if she be superanuated, so as to render it doubtful whether she would survive the Winter. In fact, as the expulsion of the drones usually takes place in the latter part of July or early in August, this is the time for rearing young queens, and the removal of those 2 or 3 years old, or which are less fertile than a good queen should be. Reserve queens reared in advance for this special purpose, and kept in nuclei or small colonies, may now be used with great advantage in effecting the change, or supplying colonies which have become queenless after sending forth a swarm, or from which a swarm has been drummed out.

Parent colonies from which swarms have issued, should be examined 5 or 6 weeks after the old queen left, to ascertain whether they contain worker brood. If none can be seen, and no young bees are observed, and no disposition is shown to expel the drones, such colonies may be regarded as queenless, and should be supplied with eggs and larvæ to enable them to remedy their loss, though they will more speedily be brought into good condition, if a fertile queen be introduced.

Weak and late swarms should be strengthened by inserting combs containing sealed brood taken from the other colonies, and supplying them also with honey or sugar syrup. But brood should be taken only from very populous colonies. Instead of such management two or more weak colonies should be united, and the surplus combs preserved for use next season.

When pasturage begins to fail, the bees, accustomed to honey gathering, are prone to attack and rob other colonies—especially such as are queenless. If the population of these is already much reduced, the introduction of even a fertile queen will often not be of permanent advantage. They should, rather, be forthwith united with some other colony.

In districts where buckwheat is extensively cultivated, or Fall pasturage is abundant, it may do even as late as August 15 to make artificial colonies; especially if the apiarist has fertile queens in reserve to be used on such occasions. The expediency of doing this depends on the strength of the colonies, and the extent and quality of the pasturage within their reach. Generally, however, it is better to allow the bees to avail themselves of the opportunity to cram their hives thoroughly with supplies for the Winter, rather than to diminish their ability for efficient labor by subdivision.

In some districts, and in some years, early swarms produce what are called "virgin swarms." Whether these should be preserved and treated as independent colonies, or caused to return to the parent hive by destroying the queen, depends on the strength of the swarm, the period at which it issues, and the prospect that they may still be able to provide for their wants in the coming Winter.

As most bee-keepers consider themselves peculiarly favored when virgin swarms appear in their apiaries, and flatter themselves that their bees will prosper, there is a general disposition to hive and preserve them; and it is hardly likely that any counter suggestions which I might make, would induce the *lucky* bee-keeper to adopt a different policy.

Richford, N. Y.

Selecting Pure Stores for Wintering.

C. W. DAYTON.

As the time is at hand to begin preparing the bees for Winter, a few words upon that subject may not be amiss.

The part to be attended to now is to see that the colonies store a sufficient amount of the best honey in their hives so as to escape removal as surplus. They sometimes store nearly all the honey gathered in the sections, and then the bee-keeper depends upon their filling up with Winter stores from the Fall harvest.

But usually the Fall harvest is too light, or nothing at all, and in consequence the bees starve through the carelessness or negligence of the bee-keeper in not giving the colonies abundant stores of the honey that was gathered early in the season.

I read in the BEE JOURNAL lately that the most of the losses last Winter were caused from "extracting from the brood-chambers."

This may be true in some cases, and in others it may not be true. Sometimes extracting from the brood-chambers may be just what saves the colonies.

For example, in the season of 1884, in June, just preceding the clover harvest, there came a harvest of honey-dew, or aphide honey.

When I saw the brood-chambers filled up with the blue, bitter honey, and nicely capped, I hastened around and ran all the combs through the extractor, getting from 10 to 25 pounds from each colony, except a few colonies that were not molested, partly for a test, and also because of the arrival of the clover harvest. Then when the white clover bloomed, they filled up the space with pure honey.

The effect of the honey-dew was watched during the next Winter, and few if any of those colonies in which the honey-dew remained came through the Winter—and these were all that died out of 65 colonies. In this case it was highly advisable to extract from the brood-chamber.

Though there has been no honey-dew here this season, it is reported in many localities, and at about the same season that it came in 1884.

Then, again, the honey-dew may come later in the season, so if the early honey is all taken out, the bees will get only honey-dew for Winter, which will almost surely bring failure.

It probably was not honey-dew that killed bees last Winter, but starvation from the bees not finding enough honey for Winter stores, or because the honey was extracted out by the bee-keeper, and not returned to them again when it was seen that they did not gather any in the Fall.

The brood-chamber should be allowed to fill up with the first good, pure honey that comes, and this should not be removed from the combs for any reason.

Some advise taking out the Winter stores and keeping it in the honey-house until Fall, but it gives me better satisfaction to leave such combs of honey in their respective hives. It ripens thoroughly, remains riper, because the hive is a better place to keep honey than any building, and I am surer to reserve a sufficient amount.

There should be as much care exercised in the selection and reservation of the Winter stores of the colony, as in the production of a few choice pounds to exhibit at the fair.

I do not think that proper stores alone will insure safe wintering, but I know from sad experience that the stores is one of the great factors, and that it is as much neglected as any.

Every one who has read the bee-periodicals very much, knows that there are many astonishing Winter losses now and then, and no one can tell any reason. I know of several bee-keepers, owning from 30 to 100 colonies, who produce comb-honey exclusively, and do not keep an extractor. Now, suppose their hives should fill up with honey-dew (bug-juice), as mine did in 1884, what would inevitably become of their apiaries?

This would indicate that to have success in wintering in some localities, one would be obliged to extract from the brood-chambers occasionally.

There is not one bee-keeper in ten but that looks forward to procuring the clover and basswood honey in marketable shape, and hastens away to sell it, and late in the Fall judges of the Winter stores by the space it occupies in the combs, or by lifting the hive, and he does not know whether the quality may compare with good hay or rotten straw.

Clinton, Wis., July 7, 1891.

Location of an Apiary.

B. E. RICE.

The subject of location means a good deal—much more than a great many would even think—and it seems to me that it would be almost useless to go on and attempt to explain what would be required to make a desirable location for bees, as well as a financial success for their owners, for I do not believe there is one person in five who would make the least effort to take advantage of it in any way.

Almost every one thinks their own ideas and ways are the best, and I do not know as I can blame them. At the same time, there are certain kinds of business, or trades, that people never become too old to learn, in order to manage them successfully, and, if I am not mistaken, we have got hold of one of them, in the care and management of the honey-bee.

I will show you as briefly as possible how some of our oldest bee-keepers locate their bee-yard, as they call it: One year ago last Fall I was visiting a bee-keeper living about 17 miles from Boscobel, who has kept bees for the last 40 years. He had at that time 140 colonies of bees, and as I stood there and looked at the sight, I had to laugh; and I guess you would, too.

He had all of those bees on not to exceed two square rods of ground.

There were four rows just far enough apart for a person to pass between them, and the barrels, boxes and gums were as close the other way as they would go together. He did not have a single bee-hive in the outfit; and then, to show his practical way, he allowed over 70 turkeys to roost every night on these bee-gums, as he calls them, and you can judge how they looked. He had lost, during that year, 60 swarms of bees, by not having their queens' wings clipped.

I asked him how much honey he generally got, on an average, per colony, and he told me from 8 to 12 pounds. I said to him: "You should get at least 100 pounds of comb-honey each from all good colonies, and of extracted-honey at least one-third more."

"Well," he said, "I wish I knew how to make them do that."

I took some little pity on the old gentleman, and explained to him what changes he should make—simply gave him the very best advice I could—and that was all the good it ever did, for he runs them the same way now, excepting that he has another brood of turkeys to roost on them.

My friends, it is this kind of honey-producers who injure us by selling their combination so much less than we can. I have spoken about this for the purpose of showing that it does make some difference how a hive is placed—whether down on the ground, and half covered in the grass, or out by itself, and up where the air can circulate and the sun strike it easily.

My ideas with regard to bees are just about the same as with all other things—that each one will do the best in its own element. For instance, take the horse, the cow, the sheep, or, in fact, all, and give them a good pasture, with plenty of nutritious grass and good, fresh water, and they will thrive and do well, and please their owner. So, on the other hand, if we expect to succeed with the bee business, we must start aright, and give them all the advantages that we can.

The question is asked, what constitutes a good location for bees? That is just what I would like to know, and see whether it beats my way. My idea of a choice for a location would be a piece of ground gently sloping to the south of east—sloping enough so that it may be readily drained of all water, as low, damp, and wet ground is very detrimental to bees—and care should be taken not to place them on ground where the water is liable to stand in small pools in the early Spring, although bees use a large amount of water in their domestic affairs, and especially in brood-rearing, and it would be well to see that good water was provided for them. They should also have some kind of protection on the north and northwest, to shelter them from the severe storms that often come from those points.

For convenience, this location should be as smooth a piece of ground as possible, on account of being kept nicely mowed off, which will be necessary, especially throughout the swarming season, and still more if one pretends to keep their queens' wings clipped, as it is a very perplexing job to find a queen-bee in grass and weeds from 6 inches to one foot high.

There are still other things that are very necessary, combined with the above, to make this location desirable, and the most important among them all, is pasturage for the bees. Before I would locate an apiary, I would satisfy myself as to these advantages, for without pasturage within their reach, it would be impossible for the bees to realize the expectations of their owners. And among some of the most important to have is the basswood, white clover, sumac, buckwheat, balm, ox-mint, raspberry, golden-rod, and button-ball.

Dozens of other honey and pollen-producing plants, not mentioned here, would assist in making a desirable location for bees; and while speaking of these honey-producing trees, shrubs, vines and plants, I would especially advise every farmer who keeps bees, either for pleasure or profit, to increase the sowing of buckwheat, and let it be of the Japanese variety, which will give you a much heavier yield per acre, and surprise you as to the amount of honey it produces.

I wish all farmers would try sowing a piece of land to alfalfa clover. Those who have grown it claim that 3 or 4 good crops of hay can be taken from it during each season. This being the case, it would pay farmers to grow it, for at the same time it is called one of the best honey-producing plants known, and by its production is our only hope of competing with the large honey-producers of California, where thousand of acres of alfalfa clover are grown. It also makes one of the finest pasturages known, never drying out after being once well seeded.

We all can make our locations more desirable day by day, with a very little trouble, by having a supply of different kinds of seeds of honey-producing plants in our pockets, such as alsike clover, sweet clover, boneset, spearmint, horsemint, heart's-ease. These seeds should be sown in all nooks and corners, and, in fact, all undesirable places, and by the roadside, and if we could encourage the growth of dandelions more in waste places, it would be very beneficial to the bees, as the dandelion produces both honey and pollen.

The catnip is a fine bee-plant and I should protect its growth by all means, rather than to destroy it. I believe it is in bloom longer than most other plants.

Now, in closing this part of my essay, I will remark that one will have a good location for bees with the above advantages close by, or within a radius of 2½ or 3 miles of the apiary.

It is not a long job to lay out a bee yard, after the plan is formed. Some people think there can be more corn grown in crooked rows than in straight ones, but we will not attempt to argue the question, knowing that the straight ones look the best at least, and that is my idea—to lay the yard out in long, straight rows, and not have the rows less than 16 feet apart. This gives ample room to pass from one end of the yard to the other, and not come in contact with so many bees.

Then, with our hives five feet apart in the row, it makes it very convenient to run the wheelbarrow with a load of honey from any part of the yard to the bee-house, without going all the way directly in front of a row of hives.

Now, as we have the apiary laid out in straight rows, we will devise some variety of stands that the hives may rest on, instead of on or near the cold, damp ground, where numerous insects, and especially the ants, are trying to make inroads into their homes, keeping a good force of bees from other work to guard their hives.

I should advise that the stands for hives to rest on, be at least 10 or 12 inches above the surface of the ground, and each stand separate and alone, and I am sure you will approve of it. It is so much more convenient to work with and around it, without thumping it occasionally with the foot, and causing, sometimes, a warm commotion around us.

The nature and instinct of the honey-bees plainly show to us that they are not in their element down close to the ground, for if they were when they swarm and go to the woods, they would as quickly go into a hollow log as a tree; and still further, they would alight on the grass or ground as quickly as a tree or bush.

Now, I think it is of very great importance—that is, if we expect our bees to do well—for us to study their instincts and habits, and supply them, as far as we possibly can, with what they most desire, in order to make them happy and contented with their home.

I advocate good stands for hives to rest on for the following reasons:

1. The insects do not bother them half as much.

2. The bees will get out earlier in the morning.

3. I believe the bees get more honey.

4. It is their nature to be up off of the ground.

5. Hives dry off much quicker after storms.

6. They are much handier to work with at all times.

7. Giving a free circulation of air around the hive.

If there is any one here that thinks it makes no difference where and how a bee-hive rests, let them try an experiment, and place one hive on the ground, and another on a good stand, one foot high, and give them the same chance for one month, say, June, and I think there will not be many but will adopt the stands. I will say this, that all of us who have our hives 10 inches or one foot from the ground, should have a board of some kind to reach from the hive to the ground in a slanting position, for heavily laden bees to crawl up on, when they miss the alighting-board, which very often happens.

In closing this part of the subject, I will say, that it will be much easier to show a small model of the stand than to describe it in writing, so, therefore, please look it over and profit thereby.

Now, after the location and laying out into rows, and spacing the distance between the hives, or stands for them to rest on, the next question would be, which is the best way for our hives to face? This is a pretty hard one to answer, for we all differ so much. I have seen them face almost all points of the compass, with the exception of the north, and they might get used to that. I have mine face a trifle south of west, but it has been for my own convenience, and I do not like it, therefore, I am going to make a change; one that I am fully convinced will be a great benefit to the bees, and also a financial benefit to their owner.

The early morning sun has a good deal to do with the bees, and the sooner the sun strikes the front of the hive so much the better. It will warm up the inmates to activity, and they will undoubtedly take wing much sooner than those whose hives face almost any other way; and, taking all things into consideration, I should advise that our hives be placed on their stands so as to face south of east.

This will give them the benefit of the sun when most needed, and then, as it rolls around on its course toward midday, and when at that time being too hot generally, the grapevine shade protects the entire hive, and its occupants, when most needed.

(*Concluded next week.*)

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
July 30.—Carolina, at Charlotte, N. C.
A. L. Beach, Sec., Pineville, N. C.

Aug. 6.—Rock River, at Sterling, Ills.
J. M. Burtch, Sec., Morrison, Ills.

Sept. 3.—Susquehanna County, at So. Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—P. H. Elwood....Starkville, N. Y.
SECRETARY—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

Bee and Honey Gossip.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

No Clover Honey.

There was no clover honey here to speak of, although the clover looked fine; but there will be some basswood honey. I had 26 colonies of bees of my own, and 55 colonies belonging to a neighbor, Spring count, and they have increased to 92 colonies altogether, so far. I work mostly for extracted-honey. My opinion is that all bee-keepers should join the Union; then they could better protect their interests.

LEWIS LAFLER.
Covington, Iowa, July 11, 1891.

Cheering Report.

My bees have done extra well this season, both as regards honey gathering and swarming. I extracted from the combs of some colonies five times within two months, securing nearly 400 pounds of good extracted-honey from 10 colonies. My increase is 11 swarms from 10 colonies, besides one swarm that went to the woods, and 2 of my colonies did not cast swarms this season; thus I have 21 colonies altogether. I can sell my honey for 10 cents per pound, cash. Sometimes I care for bees belonging to my neighbors. Some of them say they have a colony of bees which they desire me to examine, and I almost invariably find the bees queenless, or the hive full of moths. One man had a hive against which he had placed a broad board, at an angle of about 45°, and the bees had built the space between the hive and the board full of comb, and filled it almost full of honey. I smoked the bees, cut the comb loose from the hive, leaned the board against another hive, and removed the first hive to another position, and put a new hive, containing a frame of brood, in its place, then shook the bees off of the board into the new hive. I told the owner that was the first time I had ever robbed bees on a board.

A. C. BABB.
Greenville, Tenn., July 15, 1891.

No Honey-Dew this Summer.

We have 180 colonies of bees in good condition, but a detailed report of our experience would only be a repetition of your Seymour correspondence, page 76, excepting that we have not had so much rain. We have not had any honey-dew this Summer. Bees are working on basswood now, but we fear that it will not last long.

E. & O. CLARK.
Greenleaf, Wis., July 17, 1891.

Bees Storing Dark Honey.

I have been keeping bees for three years, and during that time have lost 25 colonies, mostly from starvation, owing to the drouth of last year. I began with a runaway swarm which I caught, and the next year I procured 15 colonies more. At present I have 64 colonies. Within the past 15 months I have had over 60 swarms, and only 2 that I know of went to the woods. As a rule they cluster in a cherry or apple tree, and I hive them by the use of the smoker, moving the hive immediately to where I wish it to remain. In answer to Mr. Clark's request, page 21, I will say, that if it is bees only that he wants, he can secure them by preparing some hives, and putting them up in trees in the forest. Nail up a board, and tie the hive to that with a wire or a rope, as he can then remove the hive without jarring the bees. Put the hives up just before swarming time, and report the result. A great deal of honey-dew is reported in this vicinity. Bees are storing honey very fast, but it is quite dark, although some basswood honey is mixed in, making light streaks through it. It is singular how ignorant some bee-keepers are about bees, and still will not subscribe for a bee-periodical. One man who has kept bees much longer than I have, asked me what the difference was between a drone and a queen, and there are still others who call the queen the "king." C. A. SPENCER.

Farmersville, Mo., July 7, 1891.

Prospect for an Average Crop.

Bees are not doing as well as I had reason to expect, because of too much rain during the best honey-gathering period. Swarming has been progressing slowly but surely. Prospects for a Fall flow of honey are very favorable at present, and we may have an average crop yet. J. B. Ramage and myself have just received some Italian queens, the first imported into this part of the country, and they are doing nicely. The BEE JOURNAL is a welcome visitor at my house, and one that is looked for as regularly as the day comes.

Haynie, Wash. JOHN OTLY.

Antiquated Bee-Hives.

In looking over my apiary, I find that I have 2 colonies of very fine Italians, which, from the style of their hives, might be objects of much curiosity, at least, in the Apiarian Department of the great Columbian Exposition. The most antiquated of these hives is an old gum log, which has contained bees almost continuously for the past 50 years, and although its first colony was what used to be called a "buckwheat" swarm (one cast on Aug. 8), it wintered successfully, and the next season, and for nine successive seasons, the colony occupying the gum, was the first in an apiary of from 10 to 40 colonies to cast a swarm. The other colony is a swarm from the gum log, which I hived in an old-fashioned straw hive. Both colonies contain very large and beautiful Italian bees, with probably a dash of Syrian blood, which only adds to their value. Should next season be a good one, and should you think it worth the trouble, I believe I can pack them in such a manner that they would reach you in safety. The one in the straw hive, I might be willing to dispose of, but the gum log has been in our family for half a century, and I will never part with it as long as I am able to keep bees, and would wish it returned to me. WM. S. BARCLAY.

Beaver, Pa.

[These antiquated specimens are just what we desire to exhibit side by side with the modern inventions. We commend this offer to Dr. Mason, who will doubtless be the Superintendent of the Apiarian Department.—ED.]

No Honey in the Sections.

Will some of the readers of the BEE JOURNAL explain the cause of my 3 colonies of bees not working in the section-boxes, when there has been, and now is, an abundance of honey-bearing flowers, such as white clover, basswood, raspberries, etc. Have had one swarm, which is doing nicely, but the old colonies have not stored a pound of honey in the boxes. They are in simplicity hives. A. H. HAWLEY.

Vineland, N. J., July 13, 1891.

Black, Shiny Bees.

There is something about the "black, shiny bees" that has not been satisfactorily explained. Some one (the editor, I think) has said they are old bees that the workers are anxious to be rid of. If this is so, how happens it that of a dozen colonies only one has them for weeks, or months, even, and that one is afflicted with them all of the time? In the AMERICAN BEE JOURNAL of July 9, Mr. Bittenbender says, they "seem to come from colonies that have been robbed, and are stray bees." This is not satisfactory. There are only 2 colonies nearer to mine than three miles. Neither of them has been robbed. There has been no occasion for robbing, as there has been a continual honey-flow from red raspberries for four weeks, and all the colonies have plenty of honey. A few weeks ago one colony was troubled with them, and now another colony is affected. Neither of the explanations given tallies with the facts as I have observed them. Possibly it is a matter of little consequence, yet it may become important. Is it another "nameless" bee disease? It seems clear to me that there is something the matter with the "black, shiny bees." Can Prof. Cook, or some other careful observer, explain the matter?

Walton, Mich. D. C. LEACH.

Sweet Clover.

I would like to know what you would call the enclosed flower? It was growing in a patch of alsike clover, which I sowed last Spring. I have never seen anything like it. Is the one with the white flower sweet clover? Bees are booming now. Basswood is just opening, and if the weather continues favorable, I think it will yield an abundance of nectar. Swarming is rather backward here, on account of the cold and wet weather. I have only had 3 swarms from 10 colonies, Spring count. The bees would build queen-cells, and then tear them out again, after they were capped. I would like to know if this is a common occurrence, as I have never known them to do that before. I have one colony that came out of the cellar queenless, which I have been unable to induce to rear a queen, and get her to laying. Have had 3 queens hatched out in this colony, and not one of them ever got to laying. I saw all of them after they were hatched, and then in a few days they would disappear. There were plenty of drones flying all the time, and I am at a loss to know what became of the queens. My bees wintered splendidly last Winter, with the exception of the colony that came out of the cellar queenless. S. C. BOOHER.

Danbury, Iowa, July 8, 1891.

[That having the small white flowers is *Melilotus alba*, commonly called sweet clover. It is an excellent honey plant; the nectar being of fine flavor and light color.—ED.]

Cream of Bee-Periodicals.

My thanks are due to J. M. Jenkins, of Wetumpka, Ala., as I feel indebted to the AMERICAN BEE JOURNAL, through him, for my success in bee-keeping, with the A B C of Bee-Culture, as a few years ago he sent me a sample copy of the BEE JOURNAL and *Gleanings*, and advised me to subscribe, and if at the end of subscription, I was not satisfied, he would pay the bill. Since that time I have taken others, but I consider them the cream of bee-periodicals.

Hamilton, N. C. S. D. MATTHEWS.

Wavelets of News.

Good Quality and Fair Prices.

Every man must support himself and his family by the business in which he is engaged. Therefore, when any one offers what he has to sell at prices that will not allow a margin sufficient to pay for his time, etc., it is evident that something is wrong.

Purchasers will be safe in making it a rule to always deal with reliable parties, and pay a fair price for what they want. "Something for nothing" generally proves a disappointment to the one who expects it, and usually brings trouble and perplexity.

While the above is well suited to all the affairs of life, it is especially applicable to the very cheap queen traffic of the present time. Good queens cannot be reared at from 35 to 50 cents each, and the purchaser of such queens generally finds only "trouble and perplexity" at the end of such a transaction.—G. M. DOOLITTLE, in *Rural Home.*

Rocky Mountain Bees.

Honey bees are not natives of America, as one of our correspondens at Salt Lake City would have us believe. When John Elliott translated the Bible into the Indian language, there were no words expressive of honey and wax.

There is a native species in Brazil, but destitute of a sting, and different from the bees we have.

The traditions of the Indians concur with ours, that the honey bee came from Europe, and they regarded it as the harbinger of the white man, and believe that as fast as it advances, the red man must retire.

How early bees were introduced into this country is not definitely known. They were imported into Florida by the Spaniards previous to 1763, and appeared in New York in 1793. The little black bees of the Rocky Mountains—those ugly little fellows with the tremendous stings, always ready to fight—are evidently a cross from the earliest pioneer days here.—*Colorado Paper.*

Congratulations to a Bee-Keeper.

The *British Bee Journal*, commenting on the recent marriage of Mr. James Andrews Abbot, of Dublin, to Miss Price, of Robertstown, County Kildare, Ireland, which took place on May 26, says:

"Few bee-keepers were more actively engaged in the work of publicly furthering and teaching the 'art of modern bee-keeping,' a few years ago than Mr. James Abbot (or Jim Abbot, as he would insist on beng designated by his friends), and we know of no one man more deservedly popular. By his modest and genial bearing, he was—and we hope still is—a favorite everywhere, and it has been a mystery to us how such a good fellow managed to remain a bachelor for so long; and now that a 'daughter of Erin' has removed that 'fault' from his character, we are sure that his troop of friends, who are readers of the *Bee Journal*, in congratulating him, will cordially wish long life and happiness to James Abbot and his good wife."

We also extend the congratulations of ourselves and friends to friend Abbot, and bespeak for him a successful, prolonged and happy future.—*Canadian Bee Journal.*

Italianizing an Apiary.

An apiary can be Italianized at this season without great expense. We prefer to rear queens. If a colony of Italians is of pure blood, after it has cast a swarm, several queen-cells can be obtained by opening the hive and cutting out all but one. In so doing, care must be taken not to injure the cell. Better cut out a small portion of the comb with the cell, so that it will remain intact.

Such cells can be put into other colonies that we wish to Italianize, having first removed their queens. This is done by cutting out of a comb a piece similar in size and form to that attached to the queen-cell, and inserting the latter in its place. The hole thus cut should be a trifle smaller than the piece to be inserted, so that it will fit neatly and not fall out.

Sometimes the bees will refuse to receive such a cell. Hence, has originated the device of queen-cell protectors, made of wire-cloth, funnel shaped, and put over the cell.

We have generally succeeded without their use, in the following way: We first deprive the colony to be Italianized of the queen some days before. The bees will then begin to rear queen-cells. These we cut out and insert the queen-cell in the place of the one removed.

If you should have the queen-cell before the colony is deprived of its queen, put the cell in a common queen cage or wire cylinder, and hang it between the combs until the bees start the cells.

As soon as these are cut out, the cell, if it has not already hatched, can be inserted as above described. If it has hatched, introduce the queen in the usual way. At this season queens can be readily reared if the apiarist has good stock, or an imported queen, and can spare the bees.

By taking two or three combs containing brood, in all stages of development, and freshly laid eggs, with all adhering bees with the exception of the queen, and putting them in a nucleus, or hive, reducing the space by division-boards to the capacity of the nucleus, a small colony will be started that will rear for itself a queen. Some ten or twelve days after taking such a nucleus, queen-cells can be taken from it, as the bees usually build several, which can be used as other queen-cells, taken after a colony has cast a swarm. In this way, queens can be reared, and colonies multiplied at pleasure.—Wm. Ballantine, in the *Farm Journal.*

Pine-Pollen Storm.

A few mornings ago, on arising, residents of Nashville, Tenn., were surprised and somewhat alarmed to find the ground covered with a yellow deposit resembling powdered sulphur, which, for a time, it was supposed to be. The substance was soon found, however, to be the pollen of pines, carried by the winds from a strip of pine forest extending from Louisiana through North Carolina to Virginia. The force of the winds is so great, and pine pollen so light, that the latter is sometimes carried from the pine regions to Chicago in such vast quantities that the waters of Lake Michigan for miles outside the city limits are covered with a thick, yellow scum.

This pollen, although minute in the present age, in prehistoric times was of great size, spores of some species of lycopodiums and selagenellas, which are allied to the coniferæ, having a diameter of one-sixteenth of an inch, and composed almost entirely some of the European coal beds.—*Exchange.*

AMERICAN
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OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

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Advertisements intended for next week must reach this office by Saturday of this week.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

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☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

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CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The 7 above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
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Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
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Prairie Farmer	2 00	1 75
Illustrated Home Journal	1 50	1 35
American Garden	2 50	2 00
Rural New Yorker	2 50	2 00
Nebraska Bee-Keeper	1 50	1 35

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

◆

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the BEE JOURNAL (with $1.00 to pay for the same), or 2 subscribers to the HOME JOURNAL may be sent instead of one for the BEE JOURNAL.

◆

Clubs of 5 New Subscriptions for $4.00, to any addresses. Ten for $7.50.

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00. For sale at this office.

◆

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

◆

Red Labels are quite attractive for Pails which hold from 1 to 10 lbs. of honey. Price, $1.00 per hundred, with name and address printed. Sample free.

◆

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

◆

Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

◆

Binders made especially for the BEE JOURNAL for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

◆

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

It is a Prize in Itself.—I have just seen the ILLUSTRATED HOME JOURNAL for June, with the Rebus and offer of prizes for its solution. As the paper, at 50 cents a year, is a prize in itself for the amount, I take pleasure in enclosing it, and if my answer to the Rebus is correct, you can place me as a contestant for the prize. H. E. LAING.

Chicago, Ills.

◆

The Bee-Keepers' Directory, by Henry Alley, Wenham, Mass. It contains his method for rearing queens in full colonies, while a fertile queen has possession of the combs. Price by mail, 50 cents.

◆

☞ The Union or Family Scale has been received, and I am much pleased with it. W. H. KIMBALL.

Davenport, Iowa.

◆

We send both the Home Journal and Bee Journal for one year, for $1.35.

◆

Very Well Pleased. — The Sewing Machine and Scales are received in good order, and I am well pleased with them. They do good work. The sewing machine is ornamental as well as useful. The scales are very handy for family use.—G. RUFF, Burlington, Iowa.

◆

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

◆

Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul-brood, can be procured at this office at 25 cents per ounce, by express.

HONEY AND BEESWAX MARKET.

NEW YORK, July 18.—Demand less for extracted-honey, with increasing supply. No comb-honey in market. We quote: Extracted—common, 70c per gal.; good to choice, 72@75c; orange bloom, 7@7½c; new California, 6¾@7c per lb. Beeswax: Supply limited, demand light; firm at 28@30c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, July 18.—Demand fair for new 1-lb. comb, at 15@16c. Extracted, 6@6½c. Beeswax, in good demand and light supply at 25c. CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, July 18.—Demand only fair, with good supply. We quote: Choice comb, 12½@15c. Extracted, 5@8c. Beeswax is in slow demand and good supply, at 23@25c for good to choice yellow.
C. F. MUTH & SON, Freeman & Central Aves.

CHICAGO, July 18.—Demand for comb and extracted honey not very active. We quote: Comb, 12@17c; extracted, 7@8c. Beeswax in good demand at 27c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, July 18.—Demand for honey light, with light supply. New crop arriving, and very poor. We quote: Comb—1-lb. white, 16c; dark, 13c; 2-lb. white, 14c; dark, 11c. Extracted—white, 7c; dark, 5c. Beeswax, none in market.
HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, July 18.—Demand light, and the new honey offered not very white; a fancy article of new comb-honey will sell at 17c. We quote: Comb, 15@17c. Extracted, 6@8c, as to color and quality. Beeswax: Demand equal to supply, at 28.
R. A. BURNETT, 161 S. Water St.

BOSTON, July 17.—Demand light, supply small. We quote: Comb, 14@18c; extracted, 7@9c. Beeswax: None in market.
BLAKE & RIPLEY, 57 Chatham St.

ALBANY, N.Y., July 17.—Demand for honey very light. Attractive new comb-honey would sell at 16c. Extracted slow, at 6@8c. Beeswax, scarce and in demand at 30c.
H. R. WRIGHT, 326-328 Broadway.

NEW YORK, July 17.—Demand fair, and shipments from the South increasing. We quote: Choice comb, 14@15c. Extracted—Florida, 7@7½c; California, 7@7¼c. Southern, 75@85c per gallon. Beeswax, in light supply and small demand at 29@30c.
F. G. STROHMEYER & CO., 122 Water St.

MILWAUKEE, July 18.—Demand for honey fair; supply moderate. Old-crop honey out of the way, and market in good order for shipments of new. We quote: Comb, 1-lb., 16@18c. Extracted, white, 7½@8c. Beeswax, in fair supply and dull, at 25@28c.
A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO, July 15.—Demand for honey good, and supply light. Short crop in entire State. We quote: Comb, 1-lb., 12@14c; no 2-lb. in market. Extracted, 5¾@6c. Beeswax in light demand, and market almost bare, at 24@26c.
SCHACHT, LEMCKE & STEINER, 16 Drum St.

DETROIT, July 18.—Demand for comb-honey is slow and supply fair. Quality of honey coming in is good. We quote: Comb, 13@15c; extracted, 7@8c. Beeswax in good supply, and demand easier, at 27@28c.
M. H. HUNT, Bell Branch, Mich.

CHICAGO, July 18.—Honey market quiet, and shipments increasing. A fancy white comb, in clean package, will find ready sale at a high figure. We quote: Comb, 15@17c. Extracted, 6@8c. Beeswax scarce and in good demand at 27@31c.
J. A. LAMON, 44-46 S. Water St.

NEW YORK, July 16.—New comb-honey arriving in small quantities. Demand very light. We quote: 1-lb., 16@20c, as to quality and style of package. Extracted—in good demand at 6@8c. Beeswax in fair demand, at 28@31c, for choice yellow.
F. I. SAGE & SON, 183 Reade St.

Great Interest is now taken in anything pertaining to Alaska, and those who cannot go and see what that part of our country is like for themselves, will be glad to read of the experiences of two persons who have been there, as set forth in "A Trip to Alaska," by Dr. A. Victoria Scott and Emily J. Bryant, in *Frank Leslie's Popular Monthly* for August. The article is profusely illustrated.

Punctual.—I was surprised to receive the feeder as soon as I did. I like it very well. I receive mail matter in a shorter time from you than from Carlisle, O., only eight miles from here.
JOHN H. ROHRER.
Tippecanoe City, O., July 16, 1891.

The Honey-Bee: Its Natural History, Anatomy, and Physiology. By T. W. Cowan, editor of the *British Bee Journal*, illustrated with 72 figures and 136 illustrations. $1.00. For sale at this office.

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms.

Convention Notices.

☞ The Carolina Bee-Keepers' Association will meet at the Court House, in Charlotte, N. C., at 10 o'clock a.m., on Thursday, July 30, 1891.
A. L. BEACH, Sec., Pineville, N. C.

☞ The Rock River Bee-Keepers' Association will meet at Sterling, Ills., on Thursday, Aug. 6, 1891.
J. M. BURTCH, Sec., Morrison, Ills.

☞ The ninth annual meeting of the Susquehanna County, Bee-Keepers' Association will be held on Thursday, Sept. 3, at South Montrose, Pa.
H. M. SEELEY, Sec., Harford, Pa.

Removal. — Circumstances have made it to our advantage to remove to more commodious quarters, and we may hereafter be found at 199, 201 and 203 East Randolph Street—two blocks north and one block east of our former location. This move doubles our floor space—of which we now have over 10,000 square feet. Our former location was in the fifth floor of a building, but we now occupy the *third* floor of a building near the corner of Fifth Avenue and Randolph Street. Our friends are always welcome.

◆

You Need an Apiary Register, and should keep it posted up, so as to be able to know all about any colony of bees in your yard at a moment's notice. It devotes two pages to every colony. You can get one large enough for 50 colonies for a dollar, bound in full leather and postage paid. Send for one before you forget it, and put it to a good use. Let it contain all that you will want to know about your bees—including a cash account. We will send you one large enough for 100 colonies for $1.25; or for 200 colonies for $1.50. *Order one now.*

◆

A Magnificent double page of strikingly beautiful pictures of busy street scenes in Chicago is the chief attraction of *Frank Leslie's Illustrated Newspaper* last week.

◆

☞ The sewing machine I got of you still gives excellent satisfaction—W. J. PATTERSON, Sullivan, Ills.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line,** for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

FOR SALE.—Thirty colonies Hybrid Bees, in 10-frame Langstroth Hives; all straight combs, built on foundation. Price, $4.00 per colony. Can be shipped at once. JESSE FAIRCHILD, 1241 Homan Ave., Chicago, Ills.
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READERS Of this Journal who write to any of our advertisers, either in ordering, or asking about the Goods offered, will please state that they saw the Advertisement in this paper.

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COMB FOUNDATION,

IN 25-POUND BOXES.

WE CAN now furnish the **Van Deusen** extra thin flat-bottom Foundation, put up in 25-pound boxes, in sheets 16½x28 inches, at $13.75 per box, 12 feet to the pound.

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Imported Italian Queens! July, $4.00; Aug., 3.50; Sept., $3.00. Untested Queens, from 5-banded or Imported mother, 75c each. Send in your orders now. W. C. FRAZIER, Atlantic, Iowa.
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BY

HENRY AUSTIN, of the Boston Bar.

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On and after this day, the price of **COMB-FOUNDATION** is advanced

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CHAS. DADANT & SON,
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April 2, 1891.

WM. W. CARY,

of Colerain, Mass., has one of the very best strains of **Italian Bees** in America, produced by crossing with Queens from all the best breeders, and is now prepared to furnish you with choice, **LARGE YELLOW QUEENS,** reared in full stocks, at the following very low prices:

Tested, each		$1.50
Warranted, each		1.00
"	per ½ dozen	5.00
"	per dozen	9.00
Untested, each		.75
"	per ½ dozen	4.50
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Safe arrival by return mail guaranteed. Send in your orders at once and secure these **LOW PRICES.** 26Etf

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BEING

A talk about some of the Implements, Plans and Practices of a Bee-Keeper of 25 years' experience, who has for 8 years made the Production of Honey his Exclusive Business.

By Dr. C. C. MILLER.

Its descriptions commence with the necessary work in the spring, and run through the entire Year, detailing the methods of doing, as well as telling when to do, all that should be done in the apiary. It contains 114 pages, and is nicely bound in cloth.

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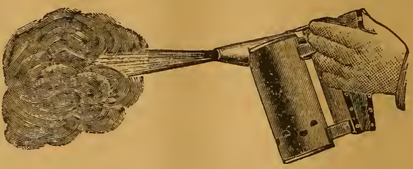
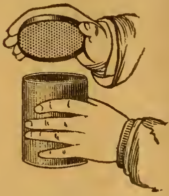


Smoker burns hard-wood chips without special preparation. Very reliable. Greatest smoking capacity. Easiest to start. Cheapest, because it saves time. Price, $1.20; by mail, $1.40; per dozen, $10.80.



Best Bee-Feeder. Most convenient. Saves feed. No daubing or drowning Two to seven Feeders full may be given a colony at one time, which will be stored in the combs in 10 hours. Price, per pair, 30 cents; by mail, 40 cents; per dozen, $1.60. Has a sale of 2,000 per month.

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IN

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Our Dovetailed Hive is now the popular one of the day. It takes like **hot cakes,** and is being sold by the carload to all parts of the country.

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Our Club Rates are: $1.90 for two copies (to the same or different post-offices); and for THREE or more copies, 90 cents each.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVIII. July 30, 1891. No. 5.

Editorial Buzzings.

Roses, roses, everywhere!
Bare and burnished sky;
Lovely languors in the air—
That's July.

Cherries tepid in the sun,
Honey-bees passing by;
All rich perfumes merged in one—
That's July.

◆

Like Many Others, Mr. John Aspinwall has been afflicted by that direful epidemic, *La Grippe*, but he is getting over its effects now. We had a pleasant call from him last week, and we were assured that, although apparently sleeping, on account of indisposition, his "wooden combs" are by no means *dead*. He has been carrying on experiments in many directions, with bees and bee-appliances, which have given results that will interest us all, as soon as he can write them up. Our readers may expect them in good time.

Mr. Ed. Bertrand, editor of the Swiss bee-periodical, *Revue Internationale d'Apiculteur*, has issued an illustrated pamphlet in French, descriptive of the modified Dadant hive, which he is introducing in that country. Sections are used in it with entrances on all four sides, in wide frames, having tin separators with holes in them to admit the bees from one section to another. It can be obtained of the author at Nyon, Switzerland, for 10 cents.

◆

C. F. Muth, of Cincinnati, O., has been ill for the past two weeks with internal inflammation, and at our last report was still confined to his room, but was improving slowly. His physician gives assurance that friend Muth will fully recover after some days of complete rest. His many friends will be relieved by the statement of his physician.

◆

When Bees are to be moved long distances, strips of muslin should be bound over all openings to keep in the bees, but let in the air.

◆

The Hornellsville Farmers' Club Fair will be held on Aug. 24 to 28, 1891, at Hornellsville, N. Y. What arrangements have been made for an exhibit of honey, we are not informed. We hope it will be an attractive one. C. K. Mason is the Secretary.

◆

The Exhibit from Central and South America, at the Sioux City, Iowa, Corn Palace this year, will be a feature that promises to attract a great many visitors. A family of natives, in their peculiar dress, will be brought from the Latin-American country. It will be open from Oct. 1 to 17, 1891. Those desiring to avail themselves of the opportunity of exhibiting their products, will be given space and information by addressing J. R. Kathrens, Secretary, Sioux City, Iowa.

Electro-Italian Bees.—In this age of progress, bee-keepers are continually on the *qui vieve* for anything that promises to increase their profits, or add to their stores of delicious nectar. The busy little bee may toil from early morn to dewy eve, but still the cry is for more. Bee-periodicals have of late contained glowing accounts of a new variety, called the Punic bee, from the wilds of Africa, concerning which marvelous stories are told. Compared with the Punics, the older varieties are not "in it," but even the latter is about to be surpassed. According to the *Advertiser*, of Madison, Ga., Mr. R. H. Campbell, of that city, is the gentleman who is possessed of a laudable ambition to improve on that wonderful bee. The article reads like a story from the Arabian Nights, and concludes thus:

> Seeing that the principal claim made for the latest discovered variety, the African Punic, is the great amount of work it does during a day, he proposes to cap the climax by producing a variety that will work not only all day, but all night as well. But to work at night he saw that the bee must have light. Therefore, he proposes to cross the Italian bee with the lightning bug, and in this way get the working qualities of the former combined with the luminosity of the latter, and at the same time utilize a large amount of light that has heretofore been going to waste. He will call this new variety the Electro-Italian bee.

When the new variety of bees is placed upon the market, and the story of their wonderful achievements is heralded abroad, the champions of the Punic bees will have to join the procession, or they will miss all the music.

In this connection, we publish the following letter concerning the origin of the wonderful Punic bee, which, if true, holds out a hope for the ultimate success of Mr. Campbell's scheme:

> When I read the article by Veritas, page 766, June 11, I had a good laugh. I have been looking out for him, but as yet he has not arrived. I should imagine he is like the boy who could not keep still for laughing, and caused everyone else to laugh. There are some little points, however, in his article, on which I hope he will not be offended at my correcting him; for instance, in the second paragraph, he says: "The Punic bee originated during the second Punic war, and was a cross between the African pissmire and the Roman mosquito." Shades of Darwin! Here is a fellow who has traced the pedigree of a honey-bee from an ant and mosquito, and even knows the exact date when this cross took place.
>
> I hope he will tell us all about its history, for we may then understand how the honey-bee orignated in different parts of the world, some being black, some yellow, some brown, and so on, but all with a tendency to interbreed. If he can make this clear, then we have only to see if ants and mosquitos are common to understand the matter, and note whether they are red, black, brown or yellow, to account for the various bees.
>
> However, to the point: If he will send his name to John Hewitt, Sheffield, England, I will send him two Punic queens, which I value at $25 each. If he considers, after trying them, that they are not worth this amount, or that the discription given of them on page 701, May 28, is not a fair one—*i. e.*, exaggerated—then he need not pay anything. I am willing also to treat every other respectable person on the same terms.—A HALLAMSHIRE BEE-KEEPER.

Alfalfa in Wisconsin.—The alfalfa at the Experiment Station was cut last Friday, for the second time this season, says the Wisconsin *Farmer* of last week, and then adds:

> The yield obtained, when the alfalfa was cut a few weeks ago, indicated an amount of 15,000 pounds of green alfalfa to the acre, not of cured hay as we intimated at the time. Prof. Henry says that the second crop, now cut, will amount to three-fourths of the first, or, at a rough estimate, about 11,000 pounds.
>
> Here is truly a great yield. Twenty-six thousand pounds of green fodder to the acre will certainly produce a very large amount of hay. To this must be added also, a third crop, which will, no doubt, be cut in due season, and which may fairly be credited with producing at least 8,000 pounds of green matter.
>
> Now, let us figure what this acre of alfalfa will have given us at the end of

the year: First cutting, 15,000 pounds; second cutting, say, 11,000 pounds; third cutting, say, 8,000 pounds; total, 34,000 pounds, or 17 tons of green fodder. Alfalfa, we are given to believe, dries out about one-half in curing, and this would, therefore, leave us 8½ tons of hay to the acre.

The results of the experiments with alfalfa will be embodied in one of the Experiment Station Bulletins this Fall.

Alfalfa is a grand honey-producer, and as it can be successfully grown in the Northwest, we have another excellent source for honey.

Honey for Shipment.—Mr. Geo. G. Scott, of Wadena, Iowa, sends us a copy of an instruction to railroad agents, in regard to honey offered for shipment, which has been issued by the Western Classification Committee:

June 23.—Honey in comb, packed in boxes having glass fronts, should not be received for shipment unless fronts are fully covered and protected.

One of the principal objects for putting glass in the crates, was that the employes of the freight or express companies may see the nature of the packages and handle them the more carefully. If this glass is to be covered up, as ordered by the Western Classification Committee, that precaution is entirely nullified.

On the other hand, the railroad companies have been compelled to pay for the depredations of employes, who have broken the glass, gouged out the honey, and ruined whole crates by the leakage, simply to gratify their appetites. This has, no doubt, caused the present ruling of the Classification Committee.

We must labor with the committee, and try to have the order revoked.

Arizona has a bee-keepers' association. It was incorporated on May 17, 1890, and is located at Phœnix, the capital. The officers are W. L. Osborn, President; J. H. Broomell, Vice-President, and J. A. R. Irvine, Secretary. They have shipped four carloads of honey to Chicago this year. It is gathered from Mesquite and alfalfa. Mr. Broomell came to Chicago with the honey, and called at this office. He says that they never fail to have a good crop of honey there. They always have the nectar and the bees to gather it, and the honey crop is assured. The only question is about the price to be obtained, not about the quantity or quality. Alfalfa honey is as clear as crystal, so thick that it will scarcely run, and its flavor is simply exquisite. The mesquite honey is fully equal to the alfalfa—in fact, it would be quite difficult to distinguish between them if it were not that the latter is of darker color.

New Dictionary.—A copy of the prospectus of the New Standard Dictionary of the English Language, has been received from the publishers, Funk & Wagnalls, of New York and London, and, if we may judge from a superficial examination of the advance sheets, and the liberal endorsement of prominent educators, both in America and England, it will be the best Dictionary ever published, not only for the scholar, but for the average reader, as well. This Dictionary does not aim to give a complete history of the English language as it was in the past, but to present it as it is now used by the best writers, and in America. The pages are somewhat larger than those of Webster's International, and typographically the work is excellent. The publishers are "sparing neither labor nor money to make the Dictionary in fact, as well as in name, the *Standard* for all English-speaking countries."

We Have received notice of the death of Mrs. Alfred Cox, at Sumnertown, Tenn., formerly an active member of the Indiana Bee-Keepers' Association, from Boone County, and an expert in apiculture. Her artistic display of honey at county and State fairs will be long remembered by those who saw them.—*Indiana Farmer.*

The Honey Crop is not what was anticipated. In some places white clover and linden gave but little honey, and in others none at all. The drouth of last year killed out the sward, and there was nothing in the early Spring to build up. The new clover is now quite promising, and as we have no drouth this year, it is reasonable to look forward for a good yield from it next year.

All hopes now hang upon the Fall crop. If the weather is propitious, and the atmospheric conditions are right, we shall have a good crop of honey from Autumn bloom. The hives are crowded with brood, bees and honey, and the bees are waiting for the opportunity to gather and store the precious nectar.

Those who have the bug-juice (so-called honey-dew) in the hives should let the bees consume it between this and the Fall bloom, if they will. On no account should any of it be marketed for honey. It is not honey, nor is it suitable for human food. To allow any of it to be sold for honey is *criminal*, for it would ruin the market for the pure article, by disgusting the purchasers. *Let no bug-juice be sold for honey!*

◆

Rambler, that is friend J. H. Martin, late of New York, is on his way to California, and gave us a call last week. He expects to remain in Sacremento and manufacture and deal in bee-keepers' supplies, etc. We had a pleasant visit with him, and hope that he will be successful in his intended business.

◆

Success; or, How to Earn an Independent Fortune. By Rev. Isa A. Eberhart, Ph. D., LL. D., President Chicago College of Science. An interesting little work, replete with valuable facts and figures, showing how it is possible for any one to live well and yet attain competency. Price, heavy paper, 15 cents. Popular Publishing Co., Publishers, 24 Howland Block, Chicago, Illinois.

Golden Carniolan Bees.—Friend Alley has sent us a cage of beautiful bees, with the following letter:

> I send you a specimen of the new strain—golden Carniolan—which was developed in the Bay State Apiary. There is not a particle of any other blood in these bees but Carniolan. Some people will state that there are no such bees as golden or yellow Carniolan. Such people do not know what they are talking about.
>
> This strain of bees are non-stinging; queens very prolific; workers far better honey-gatherers than Italians. They do not swarm as the dark, or gray Carniolans do—in fact, we have had no swarms from them this year, nor never have had one.
>
> I know of no better strain for those who desire to keep bees, but are afraid of their stings. Golden Carniolan bees will not sting; any hive can be opened without smoke, and not even one bee will attempt to sting.
>
> I expect to breed these bees so that their bodies below the thorax will be a solid golden yellow. Some of the bees sent you come pretty nearly to it now.
>
> HENRY ALLEY.
>
> Wenham, Mass.

The bees are fine fellows, having five plain, golden bands, which friend Alley says he intends to breed into *one* wide band, in the near future. American breeders now "beat the world" on thorough and careful work in producing the largest, handsomest, and best working bees, and their ideal will be fully realized before they give up the grand undertaking.

◆

W. H. Smith, of Mount Salem, Ont., asks:

> Will alfalfa clover propagate from the root? In other words, will it spontaneously spread from the root?

It will propagate from the root, for though one-half of the roots decay each year from the outside, they grow larger from the inside.

◆

☞ The Catalogue of Italian bees and queens of Otto J. E. Urban, of Thorndale, Tex., is on our desk.

Queries and Replies.

Manipulation to Prevent Increase.

Query 777.—If working for extracted-honey, how should a colony of bees, together with the hive, be manipulated if no increase is desired ?—O.

See answers to Query 776. Space too limited to reply here.—G. L. Tinker.

Give them plenty of room and empty combs, or foundation.—R. L. Taylor.

By furnishing plenty of space and combs for the bees.—J. M. Hambaugh.

I should extract the honey before the hive was crowded.—Mrs. L. Harrison.

Keep them supplied with plenty of empty combs ahead of need.—Dadant & Son.

Extract from the upper story before capping occurs. Give plenty of room.—A. J. Cook.

Keep the surplus honey extracted, and watch for queen-cells which destroy.—Eugene Secor.

Give ample room; cut out queen-cells as they are built, and trust to luck. If a swarm issues, return to the parent hive.—J. E. Pond.

Use any of the standard methods that have been so often published. This space is too limited to give any particular method.—H. D. Cutting.

I would furnish them with empty combs faster than they can fill them, and leave all on the hive until the honey season is about over.—C. H. Dibbern.

With plenty of room, abundant ventilation, and shade in the heat of the day, swarming, as I have abundantly proved, will be reduced almost to zero.—M. Mahin.

This requires too long an answer for this department. Generally speaking, giving plenty of room, filled with drawn comb, will prevent increase.—G. M. Doolittle.

By piling up several sets of combs, and allowing the queen to range up and down through the whole. Then, manipulate just right all through the season.—James Heddon.

It depends upon the location and the flow of honey. For my latitude a 10-frame hive is sufficient. Extract the outside frames, and those with capped brood, as often as necessary.—J. P. H. Brown.

In the first place, practice the tiering up system. If your bees have plenty of stores, they will be strong enough without any fussing with them. The main point is to keep a close watch over the bees, and be ready to tier up as fast as the bees need the room. Never let them see the end of their work. If they once see their hive about filled, and take the swarming fever, there is nothing for it but to deal with a swarm. See my answer to Query 776.—G. W. Demaree.

Give the bees ample room (empty comb or comb-foundation), cut out all queen-cells as fast as built, and extract the honey often.—The Editor.

New Postal Cards will soon be issued by the Postoffice Department. We are to have two sizes of cards, one for brief and the other for lengthy communications.

The smaller one will be printed on white card board, and will be ½ an inch less in length and 1/16 of an inch less in width than the present card. The superscription will consist of the words, "Postal Card—One Cent—United States of America," artistically engraved, and the time-honored caution not to write anything but the address on the front of the card. There will also be a vignette of General Grant, as he appeared in his younger days, which will, no doubt, be of interest as much from historic association as from artistic merit. The superscription and vignette will be printed in a delicate shade of blue. This card will be in favor with ladies.

The second card will be most liked by men. It will be ¾ of an inch wider than the present card, and one inch longer. It will be printed in black, and will have the same vignette as the smaller card ; the superscription, however, being of a somewhat different design. The card will be of a light manila color, and will be of a heaviness proportionate to its size.

Both cards are being made under contract; they are of a high grade of paper, and take the ink well.

Topics of Interest.

Location of an Apiary.

B. E. RICE.

(Concluded from last week.)

With your permission, I would like to call your attention to something that is being used a good deal by some of our largest and most successful bee-keepers at the present time, which they claim is very essential, and also very beneficial to the bees, and that is a good shade for the protection of the bees throughout the hot season of the year. The reasons why we should use them are many.

I have shades for about 35 colonies of bees in my apiary, and from those that are so shaded I am fully convinced that I get at least one-quarter more honey during the hot season than from those not shaded at all. The reason of this is that the whole force keeps steadily at work right along, and saves time. While, on the other hand, those that have no shade to protect them, will crawl out of their hives and cluster on the shady side, following this up day after day, because it is so hot that they cannot stay on the inside.

The first swarms I got last year were from colonies that were shaded, and I think we had better study their comfort a little more in this direction, and if we find that it is a benefit to them to be protected from the sun, of course, supply them; and, as I have stated before, if there was anything that we could do for our bees to give them an advantage, by all means give it to them.

This subject should not be dismissed until the different kinds of shades to be used, and the best mode of constructing them for use, have been discussed. The very best shade, in my opinion, that can be used for this purpose, would be one that we can derive the most benefit from in the shortest time, and with the least expense to the owner, and from my own experience, I think the grape will fill the bill nicely.

I find that the vines not only afford a beautiful shade for the bees, but the second year, by a little judicious care and pruning during the season, they will give the owner a fine crop of fruit. This is what I call a combination—two crops produced on the same ground, and at the same time, and one will nicely preserve the other. I use Concord grapes for this purpose, as they are hardy and good growers, and are cheap. They can be bought for about 6 or 7 cents each—good, fresh two-year-old vines.

My shade is constructed as follows: Take two small posts about 5½ or 6 feet long; sharpen one end, set them just south of the hive, about 3½ or 4 feet apart east and west, and drive them down until they are about 4½ feet above the ground. Then nail lath or any other strips on them, at equal distances apart, from the ground up to the top. Have this trellis about one foot from the hive, then set a good, fresh two-year-old grape vine right under the center of the trellis; and the second year it will surprise you, unless you are somewhat posted on the growth of grape vines.

There are other things that will answer nicely for shade, one of them being the mammoth Japanese sunflower, planted on the south side of the hive. Its nature is to grow stalky, and with an abundance of foliage, which protects the hive nicely, so I am told, and the seed is used for feeding fowls, and for other purposes, and when raised in desirable quantities, can be sold in market for medicinal and other purposes.

Some have advocated the setting out of small evergreen trees just south of each hive. When small they would be nice, but after a little they would be a nuisance, for they would afford too much shade.

My wife, being a lover of most all kinds of flowers, thought that if morning glories were planted on the south side of the hives, and trained on the trellises, that they too would make very nice shades for their protection.

CONVENIENCES AND TOOLS.

Here is where I think the cost comes in. Although some can get along with much less than others, and even do the same kind of work, the only way I can see is to do the best we can under our circumstances at the time, and provide ourselves with those things that are necessary, as we see the need of them. But there are some things necessary to have at the start, and in naming them I shall be obliged to state what they are used for. Among those that I consider of the most importance, is a book called a "Queen Register;" but I use it for more purposes than that, and in order to show you the usefulness of it in a well-located apiary, I will state how I use it.

I have all of my hives numbered. For instance, take the first page and record

No. 1 colony, their condition at the time, the age of the queen, and whether her wing is clipped or not (this is very important to the bee-keeper). On the second page record No. 2 colony, and so on, until you know the exact condition of every colony you have. Whenever a colony is changed in its location, make the same change, with its corresponding number that is recorded in the register.

If your book is a large one, perhaps you could record 2 colonies on the same page—one at the top and the other half way down. When they swarm be sure that you do not neglect to make a minute of the same in the proper place in the register. For if one keeps his register all right, as it should be kept, it will save the apiarist a good deal of time and trouble, and on occasions when he will hardly want to spare the time. I could give many more reasons why it pays to keep a register, but time will not permit.

The next convenience we must have is a bee-house, or an extracting-room—simply a place to extract the honey and work with it; and even store it until ready for market. It should be so constructed that it could be closed perfectly tight, or, in other words, bee-tight.

There is another necessity that I hardly know how we can get along without, and that is a small tool house for the tools that are in almost daily use in the apiary, which should be kept in as handy a place as possible, for when a couple of swarms issue at the same time, one would not have much extra time to hunt up a bee-cap, smoker, frame-lifter, knife, and numerous other things not mentioned here, but if they were in their proper place, there would be no bother.

A CHEAP LITTLE TOOL-HOUSE.

Take four pieces of 2x4, two of them 6 feet long, and two 5 feet long. Place the two long ones in front, about 5 or 6 feet apart; the other two back of them about 3 feet, and lay the floor 1 foot from the ground. Board up the two ends from the floor, and also the back, put on the roof, and one has a nice tool-house, and a cheap one, too.

A cheaper tool-house than the one described, is a common dry-goods box. Some use them for want of time to construct the other kind. The main thing is to have one of some kind for convenience sake.

The tool-house should stand close to the path that leads from the house or bee-house to the bee-yard, and should also stand facing the path (or walk) so that if, at any time, one is called to the bee-yard in a hurry, as he goes by he can take with him the tools needed. This is convenient, if one will only take pains to put tools in their place after being used, and this is where the trouble lies, for we are all liable to forget, and not put them back.

Some may think that there is too much red-tape about this work, and that there is no use of being so particular about everything. But I tell you, if we expect to succeed, we have got to be on time, and have things ready, and one cannot possibly have them too handy.

We must not do as the school teacher did. When he went into the bee-business, he said there was no use of so much folderol; and when there was anything wanted, it was time enough then to get it. "But," he said, "I will get me a good book on bees, telling me what to do, and how to do it, and study it at my leisure." So he did.

When the bees swarmed he danced around, and threw water, etc., and at last got them nicely clustered on a tree. Then what to do he did not know, so he ran to the house, found his book on bees, and by the time he got the information he so much desired, and had the hive ready to put them in, the bees had become tired, and had flown to parts unknown. He then made up his mind that it was best to have everything ready, at all times.

Another thing that is very convenient, and also quite necessary to have, is one or more barrels of water standing around in different places in the bee-yard, according to the size of the yard.

In speaking of the different tools, I will mention those only that I consider actually necessary. At the start I will say, get a good mowing outfit, the old style Armstrong machine, a good scythe, and a good sickle.

A good spring wheelbarrow is also very handy to use in a bee-yard, especially by one who is not able to carry heavy things. It is to be used for carrying combs to the bee-house to be extracted, moving colonies of bees to different parts of the yard, and, in fact, it comes very handy for most anything—even to take a load of honey to market with, as I have done many times.

If one runs his bees for extracted-honey, a good extractor will be needed, of which there a number of kinds. A good uncapping knife is also needed, and must be procured. There should also be a wide-bladed knife, say 3 inches wide, and 12 or 14 inches long, to be used for cutting the brace-combs that are built to the sides of the hives. This knife should be sharp on the end.

A good, strong pocket-knife is also very handy to use in cutting the wax between the frames, and prying them apart when working with a colony. There should also be a small pair of scissors, kept as sharp as possible, for clipping queens' wings, and to be used for no other purpose.

One needs some kind of a handy tool for the purpose of cleaning hives. Every bee-keeper should have on hand one or more queen-cages of the kind he wishes to use. It would be well also to have two or more good bee-caps (or veils) on hand, so that a visitor can use one if need be. I do not see any use of gloves, but a good pair of leggins would not come amiss.

There are many more tools and conveniences that would come handy in a well-appointed bee-yard, that I have not spoken of, and the only way we can do is to obtain those first that we are obliged to have, and then procure the balance from time to time, as we need them.—*Read at the Southwestern Wisconsin Convention.*

Boscobel, Wis.

Honey Crop from White Clover.

A. N. DRAPER.

I wish to call attention to the article on page 124, Jan. 22, on "Honey Crop from White Clover." Has not the position there taken in regard to the white clover crop been sustained, in every sense of the word, by the actual results of this season?

I tried starting a new apiary in the vicinity of a lot of bottom land that was in pasture where there was considerable white clover. It yielded more white clover honey than the other apiaries not so situated.

We had considerable honey-dew, which enabled me to increase my bees, to rear lots of young queens, and to have about 500 pounds of foundation drawn out. I am now using every effort to get my hives full of young bees, ready for the Spanish-needle flow, from which I expect a good crop, and shall begin to move the bees early in August.

The prospects for a heavy flow of white clover honey next season never were better at this time of the year, for this locality. I have been so busy this season that I am not posted on other localities.

A large part of the white clover seed from last year did not germinate and grow last Fall, but the early rains caused it to come up everywhere this Spring, and so far it has been seasonable, with frequent rains, and no scorching weather to burn it up.

The clover has now become well rooted, even on the side hills and clay land, so that it can stand quite a drouth without injury. The pastures have been good, and will hardly get into the condition they were last Fall—eaten down to the very roots by half-starved stock. Another thing; almost all the white clover is new growth, either from the seed this Spring, or last Fall, and will be in its greatest vigor next Spring. The severe drouth of last Summer and Fall killed off all the old plants. Now is the time to put forth every effort to get ready for next Summer's white clover crop.

If you have not Doolittle's work on queen-rearing, get it and re-queen all of your colonies immediately with the best stock procurable. Get your queens to work at once, and rear all the brood possible, Mr. Doolittle and Dr. Tinker to the contrary notwithstanding. Now is the time to prepare for next May and June.

I can conceive of no conditions, at this date, that would make the prospects for next season any better than they really are now. Still, I do not want to be understood as saying that the danger is entirely passed, and that a crop for next season is an assured fact.

We may have too much drouth yet this Fall, or we may have severe cold weather, with high winds, in February and March, after the clover has started. But the cold and winds will not hurt it then unless it is too dry along with the cold.

In regard to thunder storms, I think Mr. Bull is mistaken. I believe it to be the excessive wet weather, instead of thunder, that causes a cessation of the flow of honey. But I do not see that it makes much difference, as, if we have a very wet time in the honey-producing season, it is almost invariably accompanied with severe thunder storms.

I expect the heaviest yield of white clover honey next season that I have ever had, and propose to be ready for it. If anything occurs to mar or injure the outlook, I will report it promptly. I believe my theory is founded on experience, and that the truth—the actual facts in the case—can be established so that even Dr. Miller will not say, "I don't know."

That this thing can be established beyond a doubt is almost a settled fact;

if other bee-keepers would only take hold and help by reporting the condition of the growing plant, it would hasten the time. If I am reasonably sure of a crop, I can go ahead and feed every year, take more pains, and work with a great deal more energy than if there is an uncertainty in it.

All the honey-dew must be gotten out of the hives, to insure safe wintering, and moving to the Spanish-needles is almost a necessity this year, in order to secure safe Winter stores.

I can go at it with all the energy there is in me, for I am sure of a Spanish-needle crop this Fall, and almost equally sure of a clover crop next Spring.

If I had reasons to be doubtful in regard to a good flow, I could only work in a half-hearted way, but being sure of a crop, I can work with a vim, and get things in shape, so that when it comes I can get out all there is in it. This is one of the good things to be derived from being able to tell what the crop will be in advance.

Upper Alton, Ills., July 18, 1891.

Queen-Excluders, Hives, Honey-Boards.

DR. G. L. TINKER.

Bee-keepers know that Father Langstroth invented the only honey-board that has been invented. He also invented the bee-space, as well as the partitioned honey-board, the latter being illustrated in Quinby's book.

After Father Langstroth patented the bee-space and commended it to bee-keepers in the strongest possible terms, we do not consider the making of his bee-space in a honey-board an act of invention. The merest tyro in mechanics would know enough to do that, if he wanted to storify the parts of his hive.

Mr. Heddon "invented" the Moore crate. That is, he widened the partitions, and thereafter called it the "Heddon case." It was the same with Mr. Howe's reversible frame. Mr. Heddon made a slight change, and claimed it all, without credit. The same easy style of inventing gave us the "new Heddon hive." But in the latter instance Mr. A. I. Root compelled him to admit in *Gleanings* that his patented hive was only a new combination of old ideas! It was, after all, nothing but the old sectional hive fitted up with movable frames.

When Mr. Doolittle gave us his ideas on contracting brood-chambers, he unconsciously laid the foundation for the resurrection of the old sectional hive. The invention of the queen-excluder quickly followed, and I had myself determined, by many experiments, the proper size of the contracted brood-nest in working for comb-honey before Mr. Heddon's hive came out, and have used that size of brood-chamber ever since.

My hive and system are radically different from Mr. Heddon's, and it is quite too late to lay claim to it.

I have no desire to take just credit or just reward from any one, and have never denied to Mr. Heddon his right to the break-joint feature of his honey-board, though I consider it of no value in a queen-excluder as I use it.

Originally, the partitions in the Langstroth honey-board were made of various widths, according to fancy. Mr. Alley, as I understand it, made them narrow, and to run the same way as the brood-frames more than 20 years ago. Some ten years later, Mr. Heddon made them narrow and "break-joint." He did this to prevent burr-combs from being attached to the sections in the Moore crate, and has had due credit for it, yet he complains because, to avoid verbiage, I have called my invention a "queen-excluder."

I have so termed it because it subserves no other use in my hive, and if I could control the queen without it, I would discard it entirely. Mr. Heddon cannot give one sensible reason why I should call this invention the "Heddon honey-board."

As to hives, I may have written to some one that I desired to test Mr. Heddon's new combination of old ideas now styled Mr. Heddon's "new principles." I did so, having confidence in Mr. Heddon's word as to his experience! For, forsooth, had he not tested the new hive for three years? (See page 96 of his book.) Had he not kept the thing a precious secret, and watched in vain all the bee-periodicals for some account of a similar invention all this time?

Yes, sir; he had three whole years' secret experience in the use of "the greatest hive on earth." We were charmed, we were captivated; of course, we must try it, and, with many others, did so to our sorrow.

His attempt at combining old ideas into "new principles" began in April, 1884. (See *Gleanings* for that year, page 336, where he tells us all about it, how he had "slept and drempt, and laid awake," inventing a reversible hive.) In March, 1885, he had perfected his invention, and applied for a patent. In

December, 1885, he published his book. It was, therefore, impossible that he should have had over one year and some months' experience with, perhaps, a dozen hives.

The old Stewarton hive combined every one of the so-called "new principles" except movable frames, and the same with the sectional hives of sixty years ago in this country. They had horizontally-divisible and interchangeable brood-chambers, and would have been serviceable hives for modern use with movable brood-frames and the queen-excluder. They were called "sectional" or "storifying" hives.

In making use of new terms to define old principles, Mr. Heddon has misled many into thinking that he had invented a new hive. Mr. Dadant is justly credited with shrewdness, with ability, and, above all, a love for the truth. Besides, his knowledge on the subject of hives is not to be compared with any other authority that I know of. If he has intimated that Mr. Heddon has given us nothing new in hives, I do not doubt it.

However, I have no objection to Mr. Heddon laying claim to all hives of the class described in his patent. Others may, but I do not, as I am not interested in closed-end frames.

As the Langstroth hive could not, by any stretch of the imagination, be included in the "described class" of hives indicated in his patent, he has no claim upon it in any form, or in any combination with or without a queen-excluder. His patent distinctly limits his combination claims to hives of the class described.

In describing the hive I now use, I have not been slow to indicate that it was modeled after the simplicity and Cowan bee-hives. In general construction, it is identical with the latter, which was illustrated and described in Mr. Cowan's invaluable work, published in 1881. It is a storifying Langstroth hive, and involves no principles not characteristic of the above-named hives when used with a queen-excluder.

As the space between the zinc in my queen-excluder and the top-bars of the brood-frames in my hives in only about 5/16 of an inch, I fail to see the point Mr. Heddon tries to make about ½ inch spaces.

Since my last article the following from one of the leading bee-keepers and supply manufacturers of the West has come to hand: "We endorse your article on page 748. Bro. Heddon gets way off the track on so many things. We have discarded the wood-slat honey-board."

Also the following from an extensive bee-keeper and well-known correspondent of the Bee Journal, who has had experience with both two-rowed and one-rowed zinc: "I cannot agree with Mr. Heddon that 8 rows of holes in our queen-excluders are better than 16 rows. A free communication and close connection between the parts of a hive has surely much to do with the energy and encouragement of the workers, and the more open space we can have between the brood and surplus apartments, the more honey we will get under like circumstances."

New Philadelphia, Ohio.

[As both Dr. Tinker and Mr. Heddon have now been given space in the Bee Journal to elaborate their views upon the subject of queen-excluders and honey-boards, and as it seems to us impossible that a prolongation of the controversy can result in any good to either of these gentlemen, or to bee-keepers generally, we hope that neither of them will ask any further indulgence at our hands. While we are always glad to receive communications having for their object the benefit or enlightenment of bee-keepers upon any subject of general interest, we deem it our duty to ourselves, and to our subscribers, to decline to publish such as savor of personalities, however much we may esteem the writer.—Ed.]

Honey from Wild Parsnip Bloom.

WM. S. BARCLAY.

This morning I concluded to trace my bees to the source from which they gathered honey so rapidly, as they have been doing for the past few days. I knew that the chestnut and the sumac were in bloom, as well as the white clover, but was satisfied from the hum of work, and the action of the bees, that the nectar did not come from either of these sources.

The course of the bees led me to the banks of the Ohio river, which flows past our quiet village, and there I found vast numbers of bees busily engaged upon the bloom of the wild parsnip with which the river bank was literally lined, "Busily engaged" is but faintly descriptive of their labors, for, except upon yellow poplar bloom, or buckwheat, I have never seen bees in such vast numbers.

When I first observed them I concluded that they were collecting pollen, but going further I noticed the contented hum of honey gathering, and, upon close inspection, I failed to see any pollen in the sacs upon their thighs, but found each little worker loading up his store of honey to carry home; and an ample one it proved to be, as they all appeared to have filled up to their utmost capacity.

Another fact I observed—in many places much catnip grew up with the wild parsnip, and by close watching I noticed that not a bee left the bloom of the one for that of the other, viz.: left the catnip to partake of the wild parsnip, or *vice versa.*

It has been many times asserted that bees confine themselves to collecting honey from the bloom of a single plant at a time, and it is even further asserted that should they not get enough from this plant to fill the honey stomach, they would go home and dispose of it before changing to the nectar of another plant.

This theory, permit me here to say, I consider an exploded one, for within a few yards of my apiary I can take you into my garden, where you will observe three beds of plants contiguous to each other, containing borage, mignonette and portulacca (the latter yields but little honey, but plenty of pollen), and there you will see the bees leaving one plant and collecting from each of the others, probably returning to the first plant before its storehouse is full. But as this is a digression, let us return to the main point in question.

I cannot remember ever having seen the wild parsnip credited with yielding any honey to our bees, but in our extended domain, the honey flora of which is so vast, and one old bee-periodical, in its reachings out for fact of this nature, is so careful to note any change of, or new pasturage for, our chosen proteges, that I think I could scarcely have passed by such a notation.

The object in penning these observations is the hope that Prof. Cook, Mr. Doolittle, or other attentive and careful bee-keepers, will post us as to facts in the case.

Is it general that bees collect honey from this source? If so, how much? and of what quality, color and flavor? etc.

We have had so much wet weather, and such cold nights and mornings, that our surplus from white clover and linden bloom will be very much curtailed, but I am glad to state that we had an immense yield from the fruit-bloom, the locust and blackberry blooms—from the latter two sources it has never before been so abundant.

Beaver, Pa., July 12, 1891.

Bee-Keeping by a Nebraska Novice.

J. S. D.

Two years ago Mrs. D. read a great deal of bee literature, and came to the conclusion that there was money in bee-culture; so we bought a Noah's ark, with a colony of bees in it. There may be some way to get into the ark, but only a bee can find it.

We placed the thing in the back yard, and waited for developments. The bees kept flying in and out with their hind legs all dusty; so I said to myself, "There must be honey in the upper story," and I removed the mansard roof to take a peep. I did not see much, but the bees saw me one better. I managed to replace the attic upon the upper story, and departed—sadder, but no wiser.

Mrs. D. looked through the library, consulted manuals, and suggested that a smoker was just the instrument needed, while I was strong in the conviction that these particular bees belonged to the Southern Confederacy, and only wanted to be let alone. But ladies, you know, always have their way. So a Bingham was bought, the directions read, and the fire kindled.

After wrapping four yards of musquito netting over my head, and steaming up the smoker, I approached the hive, blowing smoke around like a Mississippi steamboat, stuck on a sand-bar. I smoked them below, took off the mansard, smoked them above, and carefully examined the glass conservatory under the roof, but found no honey. Mrs. D. said, "I told you so; you never find honey until the white clover comes."

We did not bother the ark after that oftener than four times a week, but always found the glass parlor decidedly empty. Having friends visiting I was good, so went to church one fine Sunday in June, leaving the son and heir at home with grandma. The first greeting after the garden gate was passed was, "Papa, the bees are swarming." So they were—the air was full of them. I immediately inquired for the dish-pan, a hammer, a pair of tongs, and two or three cow-bells, none of which were forthcoming. It was Sunday, and we lived in a religious neighborhood. It was wrong for the bees to swarm on Sunday—just when I had on my store clothes.

By and by they settled in a tree. Armed with a smoker, veil, saw and ax, I proceeded to demolish that swarm, and send them to their new home. Mrs. D. came out with a sheet—a span new one—placing the new hive on the sheet, and both under the swarm on the tree, I proceeded to sever the limb. Carefully wrapping the sheet around the hive, I returned to the house to think over the sermon that the bees had driven from my bonnet.

The next morning I removed the sheet from the hive and found it full of holes. I presume the bees wanted to get out, but they need not have eaten up the cloth. Mrs. D. remarked that it was "just like a man" to take a new sheet, to try to save an useless swarm of bees (she forgot that she brought it out for me).

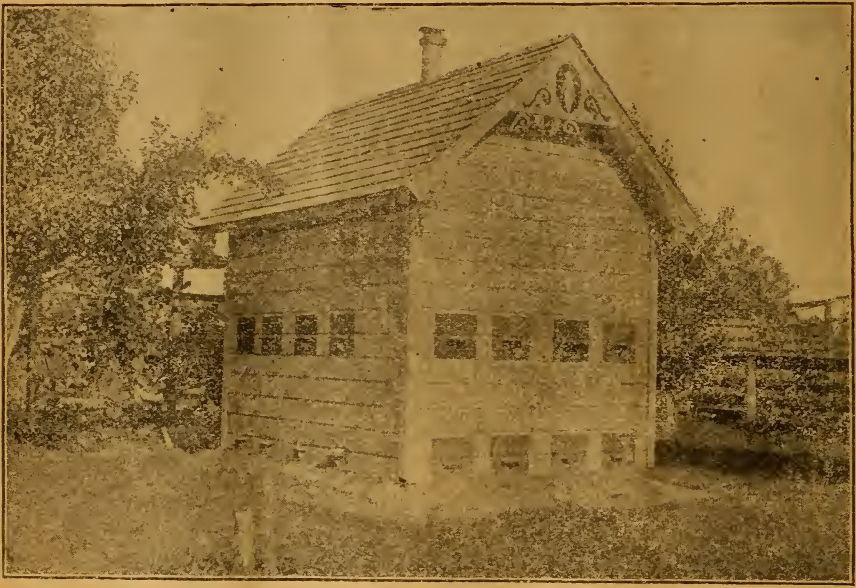
During the Summer the ark sent off 11 swarms, and yet was full of bees—not honey. Some flew away, some were sent back home, and some were put into new quarters. Winter found us with four boxes full of bees—and we bought our honey, as usual, from the store. This Spring found us with the four, but now only the one old Noah remains—and we have supplies for sale.

Orchard, Nebr., July 11, 1891.

My Bee-House and its Management.

H. A. MORGAN.

My bee-house is 8x10 feet, and 7 feet high in the clear. It is lined, and the 4-inch space between the inner and outer walls is filled with dry sawdust. There is a 4-inch ventilator through the roof. It will hold 24 ten-frame Langstroth hives, each super containing 32 one-pound sections.



BEE-HOUSE OF H. A. MORGAN.

The hives are placed 2 inches from the wall, and the openings of the chutes are covered with wire-cloth. In Winter the chutes are closed on the outside, and the bees get air from the inside of the house. In Summer time, when it is hot, I use nothing but burlap on top of the hives, and I have no bees hanging out—they stay in the hives.

I can go into my bee-house at any time of the year without starting robbing, and by opening the Winter door, and closing the screen-door, I have all the light necessary from the door to take off honey or examine any hive.

I never lose any bees in my bee-house, as they can have a flight at any time during the Winter, when it is warm enough, or I can close them up at any time.

From the bees kept in the house, I get more honey than from those that I keep out-of-doors, and I am so well pleased with my bee-house that I have built another one, and shall keep all of my bees in the house.

There are so many advantages in managing bees during swarming time in a house like mine, that I shall not attempt to enumerate them.

Brazil, Ind.

Honey-Bees of America, Etc.

W. P. FAYLOR.

Bee-keepers of the western continent are now pressing largely after the yellow race. In scanning the advertisements of the BEE JOURNAL and *Gleanings*, we discover the fact that comparatively few are breeding bees from imported stock. Bees reared in Italy are good honey-gathers; but cannot the same be said of some of the bees of America?

The truth is that climatic influences in Italy give an abundant honey-flow, which is necessary to produce good, active honey-gatherers. In this country the honey-flow lasts but a short time, and many queen-bees are produced when the bees are gathering no honey at all; and under these unfavorable surroundings, how can we expect to produce a good honey-bee?

To get our bees to equal the bees of Italy, it is only necessary to stimulate strongly by feeding while the bees are rearing queens. I feed my bees plenty of extracted-honey while they are feeding the larval queens, until the cells of each colony are capped, and by thus stimulating, I get the same results as Italy gives.

I have just hand-picked the drones of a half dozen colonies—of course, these colonies are kept queenless so that they will not destroy their drones.

It is not the color—yellow, brown or black—that gives the honey-bee, but that which has been reared under the stimulating impulse. If we can add the golden hue, we are that much ahead of Italy, and unless the breeders of bees and queens in Italy procure some of the yellow stock to breed from, they will soon be left behind in the chase. What I have said regarding the honey-gathering qualities, applies equally to gentleness.

One of the largest dealers in queens and bees in America buys queens from different quarters, has them piled up on his table ready to ship at a moment's notice; any queen-breeder could do the same, if he cared nothing for beauty and quality of bees. I would not purchase queens from any man, if I knew he did not rear his own queens, or warrant them to be as good.

QUEENS MATING LATE.

Owing to the cool weather, virgin queens have been slow to find partners this season. Two of my queens mated 31 days after they came from their respective cells. They were reared early in April, and met admirers May 11. I had reared a few nice drones, and thought I would get something handsome, but what was my surprise to find that these queens would not come out of their hives until so late in the season. These queens are very prolific, and, I believe, are larger than queens that mate early.

To induce drones to fly thickly about the time queens come out to mate, drop a spoonful of honey at the entrance of the hive—not at the hive from which the queen emerges, but at the hive from which you wish the drones to fly.

CLOSED-END FRAMES.

A few years ago I tried a hive with closed-end frames, and abandoned it; but since the matter was discussed in *Gleanings* last Winter, I made one hive with such frames, making everything true to 1/32 of an inch. As long as there were but a very few bees in the hive, these frames worked pretty well; but oh! me; to handle them now. After the frames are all in the hive but one, I pick up the last one and begin to slide it down between two frames. It goes about this way: There—now—go slow—be careful—almost down—very slow now—whoa—stop, till those bees crawl out there—but the bees are crushed, and I close the hive in disgust.

DRONE COMB.

I believe that for the extractor, drone comb in the upper story gives me better returns in honey than worker comb. The bees draw these large cells out to a further distance, and slanting upwards, which makes them shave nicely with the uncapping knife; then you have some honey when these combs are emptied.

State Line, Ind.

"Advice to Beginners" Answered.

JAMES HEDDON.

If a periodical devoted to bee-culture can be purchased at the rate of 52 copies for $1 (less than 2 cents per copy), after we consider the knowledge we gain from a year's subscription, let us candidly ask the question, what is one bee-keepers' convention worth, so far as the gathering of apicultural wisdom is concerned?

We hold such conventions, and propose to. Why? Because, through them we become acquainted with each other, adding largely to any acquaintance we may have, or fancy we have, through the pages of our bee-periodicals. Some one (I think it was Bro. Hutchinson) wrote that after he had formed the acquaintance of a prominent bee-keeper and writer (meaning personal acquaintance by meeting him), that writer's articles, thereafter, were worth much more to him.

True; but why? Is it not because we all make statements which we cannot afford the time, nor the editor the space, to prove by logical deduction? We ask our brother bee-keepers to take our word for many important statements, and by mutual consent it is so taken.

In the light of the above it is certainly important to know something of the character of the writer; especially is it important to beginners.

The matter of how much passageway is needed by a strong colony, is one of great importance to practical honey-producers, and one the discussion of which arose between Dr. Tinker and myself, and while it seemed from the discussion at one of our late conventions that an inch hole would furnish the requisite passageway, the practical discussion is between two rows of holes in the strip of zinc slipped in between the slats of my honey-board, as advocated by Dr. Tinker, or one row in said zinc strip, as advocated by myself. In other words, do our bees need more than 8 rows of queen-excluding openings to offer them ample passageway between the brood and surplus apartments?

That is the question really under discussion. I say, "No; half of it would be sufficient." There is another serious objection in the fact that the workmanship must be very much more accurate—painfully and tediously accurate—and also tending to increase the building of brace-combs between the top surface of the honey-board and the surplus sections above, while it in no way benefits the bee-keeper. The reasons of which I have fully explained heretofore.

With regard to the second paragraph of Mr. Draper's article, page 81, wherein he quotes from Mr. Tunicliff, I wish to state that, although I originated the use of the thumb-screw in a hive, and have done nearly all that has been done to introduce it, I found, to my surprise, incontrovertible evidence that Mr. Manum had previously used it for a part of the purposes for which I employ it; consequently, in my patent, my claims are limited to the uses for which I employ it, and Mr. Manum did not.

The above is the only instance wherein we have the least positive evidence, such as would be required in court, where any part of the construction of my hive claimed to be new, can be shown to be antidated.

Mr. Draper's quotations from "Success in Bee-Culture," surrounding his one word, "nonsense," contains all the argument that it contained when written, and I am willing to stand by it.

I thank Brother Draper for calling the attention of bee-keepers to the fact that in my book I described the new hive, extra fine four-piece dovetailed sections, together with my method of producing large quantities of extra-fine white comb-honey. I hope Brother Draper will forgive me for trying to explain in the publication of a book how to accomplish certain results which I previously had done.

But the next paragraph is a stunner, as I do not now remember ever penning a lie for publication in a bee-periodical, nor selling any comb-honey to farmers for 20 cents per pound, I shall have to ask Brother Draper to find the page where it is published in the BEE JOURNAL.

Again, I will have to thank my friend for publishing the fact to bee-keepers that I am continually offering to them choicest extracted-honey at low prices, for cash with the order. It is a fact, and whatever blame there is to be attached to it, I must bear.

The reference to Barnett Taylor's remarks at the convention at Madison, Wis., so far as I am able to see, has nothing to do whatever with my advice to beginners, nor with my invention. In that statement Mr. Taylor claims nothing that I do.

The time will come when Bro. Draper will see the difference between a divisible brood-chamber, constructed as described and used for new and specific purposes, and the piling of one old brood-chamber on another. The latter is a very old practice, while the former is new, very different, and productive of most beneficial results, as my friend will discover by reading the testimonials in a circular now mailed to him.

Regarding H. A. King's hive without bottom-bars, Brother Draper is quite right. I have the book in my library, and know of lots of other frames without bottom-bars. I supposed everybody knew that frames without bottom-bars were old as time, but I thought it would strike bee-keepers as something new to find that old feature connected with my new hive, frame and system, and I think they did so consider it. I believe it is thought to be a unique and valuable combination of old and new features when used in the non-divisible brood-chamber.

Again, I thank Brother D. for quoting the paragraph concerning the stealing of an other's inventions, as compared to stealing bread.

Brother Draper and I do not understand alike my note in the BEE JOURNAL concerning the sowing of alsike clover seed by farmers. I am proud to admit that what I did, and what I wrote is most characteristic of the inventor of a honey-board and hive that is so good that others desire to claim it.

The article I published in my paper concerning alsike clover for farmers, was every word quoted from the writings of M. M. Baldridge, which had been published in the office of the BEE JOURNAL, and the cut was borrowed from that periodical. I then thought, and now think, that he had told the truth about that stock food and honey plant, and that I was doing good to everybody (myself included) by further publishing the truths he had told. Perhaps Bro. Draper does not know that artifice, or even deception, may be used in such a way as to be a virtue. When the maniac told the lady he could throw her out of a fourth-story window, she told him that that was nothing to boast of; that she could throw him from the ground up into that window, if he would go down with her—which he did. I tell you I admire that woman's deception, cool judgment and trickery.

Now, mind you, I do not say that all farmers are lunatics, nor hogs enough to bite their own noses off to spite their faces, but of late I believe it has become popular to protect your own honey field, if I *was* called bad names for being first to advocate it; and as I have said before, whoever adds to his honey-flow by artificial planting of any sort, had better keep as quiet about it as possible.

Every neighborhood contains some men like the one in Kentucky, who chopped down a fine basswood shade tree in his field, because Bro. Demaree's bees were working up a combination with that tree which would benefit their owner.

Then, there is another class who could not be made to believe but that nearly the entire honey-flow came from the planting; and being so constituted as to enjoy a greater ecstacy in reaping what others have sown, rather than what they themselves had planted, they would at once establish an apiary in an already occupied field. Perhaps not in Mr. Draper's locality, but in most cases such danger is imminent, and I publish it for the mass of bee-keepers, and I stand by what I published, and am sure I meant to be honest. Heaven knows I am against injuring any "poor, honest editor." You don't know how I sympathize with them.

Brother Draper's last paragraph I am simply mashed on. I want to be "investigated." I have a notion to offer a premium to each and every bee-keeper who will go back over the files of all the prominent bee-periodicals and read all that I have written—especially in the controversial line—and also read the other side of the controversy.

Dowagiac, Mich.

* * *

The Pungent Odor of Propolis.

GEORGE A. STOCKWELL.

A young bee-keeper writes to inquire why his bees "smell so;" why such a pungent odor comes from the hives. He imagines that some terrible disease, perhaps foul-brood, has attacked the colonies. The pungent odor comes from propolis, which all bees collect to cement the hive, and make it snug for Winter. The odor of propolis—a resinous substance obtained from pine, balm of gilead, and other trees—is said to possess healing qualities, to minister directly to diseased lungs. The bee-keeper who opens his hives often and takes long draughts of the odor, will be made stronger for his work, and he will find that the odor of propolis is quite as beneficial and a deal safer than the so-called elixir of life.—*Ploughman.*

* * *

☞ The sewing machine I got of you still gives excellent satisfaction—W. J. PATTERSON, Sullivan, Ills.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Aug. 6.—Rock River, at Sterling, Ills.
J. M. Burtch, Sec., Morrison, Ills.

Sept. 3.—Susquehanna County, at So. Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

North American Bee-Keepers' Association

President—P. H. Elwood....Starkville, N. Y.
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y and Manager—T. G. Newman, Chicago.

Bee and Honey Gossip.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Fixed or Hanging Frames.

Basswood is just in bloom, and my bees in the home apiary, about 200 colonies, are doing a big business. I have tried about all kinds of fixed frames for hives, and am prepared to make my report, and will do so to the Bee Journal soon. I have been compelled, by experience, to pronounce the hanging frame the best in use for anything but very shallow hives, and quite likely for them, too. To-day, the fixed frame which I exhibited at the Keokuk convention, is the only one I could tolerate, and bee-keepers are going to be greatly injured by this fixed-frame craze. **Barnett Taylor.**

Forestville, Minn., July 10, 1891.

Badly Mixed Honey Crop.

I infer from your editorial in regard to my poor health, that my friends were unnecessarily alarmed about me. It is true, I have had rather a discouraging time of it since June 1, but am glad to say, that for the past week I have made a decided gain, and feel that "Richard will soon be himself again." Michigan, as a State, is experiencing her fourth poor season. It is true, that in certain localities they are getting some honey, but I have seen none yet that was gilt edged, and I doubt if there is much of that quality being gathered anywhere, and I am sure that the man who has it can depend on fancy prices—if he knows how to sell. Reports from different States show that the crop is badly mixed. I attribute the cause here to the continued open Winters we have been having. Our pastures and meadows are fast going to June grass, which is the worst enemy the white clover has, but with our usual deep snows, and the absence of frost in the ground, I think our clover would assert its rights, and the chances for the old-time crops be enhanced. For eight years my home apiary gave me an average of 75 pounds per colony, Spring count, 75 per cent. of which was comb-honey of fine quality, but for the past four years it has not averaged 10 pounds per colony.

Geo. E. Hilton.

Fremont, Mich., July 23, 1891.

Very Little Nectar.

The season is practically over here, though the prospect is favorable for a Fall crop. The clover bloom has never been more abundant, but for some cause it has furnished very little nectar. All the conditions seemed most favorable, and I am at a loss to account for it. Our crop is only a little better than that of last year, and, besides, nearly all of the honey is dark. **G. L. Tinker.**

New Philadelphia, O., July 18, 1891.

Purchasing Bees.

In April, 1890, I sent money to a firm who deal in bees for 3 full colonies of Italians, but did not receive them until May 30. On arrival, 2 of the colonies were in good connition, but the third one had all the combs but two broken down, and brood and bees were destroyed. As the firm had guaranteed safe arrival, I requested them to send one frame of brood, to partially replace those destroyed, but received no answer until I had written to them two or three times, when they wrote me that, as I was a stranger to them, they could do nothing unless I would forward an affidavit from the express agent that the bees were in the condition I claimed they were. I replied that I had trusted them with the money for the bees when they were strangers to me, and if they could not take my word for such a small matter, they need not bother their heads about it. In September, if my memory serves me right, I received two frames of brood from them. In March, 1891, I ordered 6 pounds of bees, and 6 queens from Colwick & Colwick, of Norse, Tex., and on April 9 they arrived, but only 2 of the queens were alive, the other four having been destroyed by the carelessness of the express company. I communicated that fact to those gentlemen, and on May 5 I received queens from them to replace those destroyed.

J. SUNDERMANN.

Huntington, Ind.

Black, Shiny Bees.

The idea advanced, on page 53, that the black, shiny bees were from neighboring colonies which had been robbed, was a new one to me. I have never had any bees that would take pity on starving bees, and allow them to stay in one corner of the hive, giving them half rations, although I had 3 colonies afflicted with black, shiny bees last Spring. It is black diarrhea. On close examination, you will find them badly swollen, and unable to fly, and their wings quivering, before they turn black and become reduced to mere skeletons. My best colonies were effected, although having plenty of honey. I cured them by giving weak salt water in a feeder.

Gale's Creek, Oreg. J. H. BERRY.

Tore Down the Queen-Cells.

Where are the honey crops which some have been prophesying that we would secure? We do not expect to gather grapes from thorns, nor crops of honey where due preparations for a crop were not made. What are the motives which a few writers have in view when they write that specialties are the thing for us? The *Farm Journal* said, editorially, a few years ago, that 25 colonies of bees should pay a farmer's grocery bill for the season. Sixteen years ago, I think, the question was asked in the *Drover's Journal*, if $300 a year could be made by keeping bees, and the editor said "no." That editor came nearer to stating the truth than did the *Farm Journal.* I have kept bees for five years, and my first season was the only good one I have had. My apiary usually numbers about 40 colonies, and I have had but one natural swarm. Perhaps I keep too many colonies, or my locality is a very poor one. My hives are 8-frame simplicity, and I work principally for comb-honey. I live in Logan county, in the center of the "corn belt." This year my bees were in excellent condition when clover bloomed, but little was done in the supers, and that was spoiled by the presence of what I think is honey-dew. It is as black as tar, though of excellent body and flavor. Where it came from is a mystery to me, as I live 4 miles from the timber, and the only trees in the village are maples and willows. I made 16 nucleus colonies, and when they were 48 hours queenless, I gave them queen-cells, 15 of which were torn down, and the bees built others to suit themselves; but why, I am at a loss to understand. JAMES HAMILTON.

Beason, Ills.

Texas Report.

Bees have done very well thus far this season. I have 2 colonies from each of which I have taken 84 well-filled 1-pound sections, and from several others 72—the majority 48—and they are still storing honey. I would not be without the BEE JOURNAL for anything.

J. D. GIVENS.

Lisbon, Tex., July 16, 1891.

World's Fair Exhibit.

Am delighted to see the bee and honey exhibit for the World's Fair showing such bright prospects. Let us hope that it will not prove such a fizzle as at the Centennial, and that foreign nations will not carry off *all* of the prizes.

JOHN ASPINWALL.

Barrytown, N. Y.

Patent Hives Again.

We have had the best year for honey, so far, that I have ever known. There is a party in our county selling rights for a patent hive for $10, but it is worthless, and I advise my friends to take the BEE JOURNAL instead of spending their money for such hives.

T. P WILLIAMSON.

Golconda, Ills., July 22, 1891.

Total Failure.

So far the honey crop is a total failure. Bees are almost starving in the midst of apparent plenty. The clover is a complete failure—no nectar, and only a light growth. We suppose it was killed out during the drouth last Summer and Fall. Smart-weed is a fine crop, but yields no nectar. A small purple flower that grows on wet land, and has always been such a treat for the bees, is giving them nothing so far, although the crop is good. Blue vervain is a total failure—none growing. My 78 colonies have cast only 3 small swarms. If there is no improvement, we bid adieu to our pets. P. P. COLLIER.

Rush Hill, Mo., July 12, 1891.

Brighter Prospects.

Bees are doing well since the rain, about ten days ago. I had 20 colonies, Spring count, and up to date have had but 2 swarms. HENRY ZOLLNER.

Waupun, Wis., July 13, 1891.

Thunder Storms and the Honey-Flow.

The honey season is now over in this part of the State. A few apiaries, in favored localities, have yielded fair crops, mainly of amber honey, some of it quite dark, and none water white. The usually accepted theory that largest yields are secured 30 or 40 miles from the coast, has been reversed this season, and the best crops have been secured near the coast. Several carloads of bees were shipped from here last Winter to the upper Santa Clara Valley, the owners losing this year's yield. An experience of some years in Northern Missouri, where the main part of the forage is white clover, convinces me that Mr. Bull (page 76) mistakes a coincidence for the cause. It is not the electricity of these storms that checks the honey-flow, but the excessive rainfall that usually accompanies them. An electrical storm and moderate rainfall in dry weather increases rather than diminishes the honey-flow. White clover, on account of its shallow rooting and proximity to the ground, is effected more than other plants by an excess of moisture. B. A. RAPP.

Ventura, Calif., July 20, 1891.

Almost a Total Loss.

Last Fall I had 16 colonies of bees, but lost all of them excepting one colony during the Winter. I have built them up until I now have 4 colonies, and hope I shall have no more bad luck with them, as they are doing well, at present, on white clover. JOHN BOERSTLER.

Vashon, Wash., July 20, 1891.

Clubs of 5 New Subscriptions for $4.00, to any addresses. Ten for $7.50.

Wavelets of News.

Heading Off the Robbers.

If it be necessary to feed some weak colony of bees in the Spring, and other swarms begin to rob them, remember the old and simple remedy: Place straw loosely against the hive entrance and wet it. The robbers in crawling through get wet and lose their grit, stopping the robbing at once.

Except during a honey-flow, bees from other hives will pounce upon any honey left exposed. If one bee that may be hovering about, searching for such a chance, discovers it and secures a load, it quickly returns with a score of companions, and they in turn, if successful, will each bring as many more, and a large quantity of honey will be carried away in a short time, as well as a great uproar caused, during which there is danger that every person or animal, anywhere near, will be severely stung. So look out and do not give one robber a chance. —*Exchange.*

Making Increase.

A simple and safe method of forming new colonies is to go to a strong one and take from it two frames of capped brood and place them, bees and all, in a new hive. From another colony fully as strong, borrow two frames of hatching brood, and place one on each side of those in the new hive. In both cases be careful not to take the old queen.—*Exchange.*

Skunks as Bee-Eaters.

Skunks not only make raids upon the poultry, but they find it very profitable to attack the bees' stores of honey. They are unable to get into the hives, not having the gnawing powers of some of the other rodents, but they succeed very well in killing the bees. Their mode of procedure is to scratch on the outside of the hive until the attention of the bees is attracted, and they come outside to ascertain the cause. Then they catch the bees as they emerge from the narrow doorway and proceed to eat them. They prefer those bees with honey in their sacs, and the dead drones in front of the hives are not touched.

The skunks would be a greater nuisance if they could get in at the honey, for they would then be in their glory. However, one or two of these creatures can rapidly depopulate a hive by the method mentioned. Traps are about the only thing that will stop this thieving, and as the skunks are not at all pleasant things to handle, unless dead, this method of catching them is not always satisfactory. Steel traps only wound them, and do not kill unless it catches them in a vital part.—*Amer. Cultivator.*

Apiarian Items.

The bees garner what would otherwise go to waste.

Every fruit grower ought to keep a few bees, and so should every grain grower.

The ideal place for an apiary is where the bees can get plenty of bloom—Spring, Summer and Autumn.

Our boards of education would do well to follow the example of the thrifty Germans, and have the art of bee-keeping taught in the public schools. —*Farm, Field and Stockman.*

Modern Management Economical.

Formerly June was the time in bee-keeping that taxed both our physical and mental powers to the utmost; but now, with our new swarm catchers, each swarm is caught at the entrance of its hive, without reaching the open air at all, and the burden of swarming is changed into an Arabian Nights dream. No more running with heavy ladders, and climbing into tree tops. No more dividing from two to eight swarms all settled together in one huge black mass; now each swarm is kept entirely separate, and hived in the cool evening when all swarming is over for the day.—B. TAYLOR, in *Farm, Stock and Home.*

Dwarf Bees.

For several years there has been considerable inquiry in regard to the cause of dwarf workers among bees. As yet I have failed to see even a guess as to their origin.

Last season I noticed them among some of my colonies. Some were scarcely two-thirds the size of the workers. They possessed a sting, but were not inclined to use it, even when caught by the wing, unless ill-treated. They seem to be incapacitated for gathering honey, or work in the hive, and were dragged forth by the workers in the same way they get rid of drones.

This season, when straightening some crooked brood-combs, my thoughts turned to these small bees, and I also recollected of straightening some combs last season containing larvæ. This gave me satisfactory cause of the dwarf bees. Straightening the crooked combs narrowed the cells on the convex side of the combs, which, as a matter of necessity, made the workers smaller in those cells. Doubtless the workers in the cells on the opposite side of the combs were larger, but as they were able to assist in the labors of the colony, they were unnoticed.—DRUID, in *National Stockman.*

Beeswax, its Production and Uses.

A large amount of honey is annually consumed in the various industries and manufactures, while the commercial value of beeswax is very great. Nearly 500 tons of beeswax are annually imported into Great Britain, while Russia uses nearly 5,000 tons in the ceremonies of churches.—*Farm, Field and Stockman.*

Water for Bees.

It makes considerable difference with a colony of bees whether they get water close to the apiary, or go half a mile for it. An earthen dish holding a gallon or more with a cloth sunk to the bottom, and the edges hanging outside the dish, is very convenient for them to get water. Strange to say mine keeps a constant drip from the edges of the cloth until the dish runs dry.—J. H. ANDRE.

Swarming Fever.

There has been no remedy discovered that will cure this disease—no quinine for bees. Divide a colony into three parts, and each will swarm if the fever is at a high pitch. The Dadants, who are large producers of extracted-honey, control swarming in a measure, but when a colony has the fever, do not attempt it, but let them swarm. Then hive the swarm, let it remain 48 hours, and return it; if queen-cells have been built, the returning queen will destroy them, and if a young queen has emerged in her absence, they will have to decide between themselves which shall live. It would be well for those desiring no increase in the number of colonies to try this plan, and at the same time the swarm is returned give more room, ventilation and shade. When bees have the swarming fever, there is no intermission until they succeed.—MRS. L. HARRISON, in the *Prairie Farmer.*

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OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

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We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
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Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The 7 above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
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Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

◆

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

◆

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

◆

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00. For sale at this office.

◆

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

◆

Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

◆

Binders made especially for the BEE JOURNAL for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

◆

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the BEE JOURNAL (with $1.00 to pay for the same), or 2 subscribers to the HOME JOURNAL may be sent instead of one for the BEE JOURNAL.

Frank Leslie's Illustrated Newspaper for the week ending Aug. 1, has special attractions for Summer readers. One of its striking pictures is entitled, "Back at the Old Farm for the Summer;" another depicts "City Folks at a Country Church." The leading editorial contribution is from the pen of Miss Mary Proctor, daughter of the late Richard A. Proctor, the eminent astronomer, and has as its subject, "The End of the World."

◆

The Bee-Keepers' Directory, by Henry Alley, Wenham, Mass. It contains his method for rearing queens in full colonies, while a fertile queen has possession of the combs. Price by mail, 50 cents.

◆

We send both the Home Journal and Bee Journal for one year, for $1.35.

◆

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms.

◆

It is a Prize in Itself.—I have just seen the ILLUSTRATED HOME JOURNAL for June, with the Rebus and offer of prizes for its solution. As the paper, at 50 cents a year, is a prize in itself for the amount, I take pleasure in enclosing it, and if my answer to the Rebus is correct, you can place me as a contestant for the prize. H. E. LAING.

Chicago, Ills.

◆

Red Labels are quite attractive for Pails which hold from 1 to 10 lbs. of honey. Price, $1.00 per hundred, with name and address printed. Sample free.

◆

Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul-brood, can be procured at this office at 25 cents per ounce, by express.

HONEY AND BEESWAX MARKET.

NEW YORK, July 24.—Demand rather limited, with large supply of extracted, and few small lots comb-honey. We quote: Comb—1-lb. white, 14@15c. Extracted—common, 65@68c per gal.; good to choice, 70@72c; orange bloom, 7@7½c; new California, 6¾@7c per lb. Beeswax: Supply heavy, demand limited, at 26@28c.

HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, July 25.—Honey in fair demand, and light supply. We quote: White 1-lb. comb, 15@16c; dark, 10@12c. Extracted, 6@6½c. Beeswax in light supply and fair demand, at 22@25c.

CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, July 25.—Demand only fair, with good supply. We quote: Choice comb, 14@16c. Extracted, 5@8c. Beeswax is in fair demand and good supply, at 23@25c for good to choice yellow.

C. F. MUTH & SON,
Cor. Freeman & Central Aves.

CHICAGO, July 25.—Demand for comb and extracted honey not very active. We quote: Comb, 12@17c; extracted, 7@8c. Beeswax in good demand at 27c.

S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, July 25.—Demand for honey light, with light supply. New crop arriving, and very poor. We quote: Comb—1-lb. white, 16c; dark, 12c; 2-lb. white, 14c; dark, 10c. Extracted—white, 7c; dark, 5@6c. Beeswax, supply and demand light, at 25@26c.

HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, July 25.—Demand light, and the new honey offered not very white; a fancy article of new comb-honey will sell at 17c. We quote: Comb, 15@17c. Extracted, 6@8c, as to color and quality. Beeswax: Demand equal to supply, at 28.

R. A. BURNETT, 161 S. Water St.

BOSTON, July 24.—Demand light, supply small. New comb and extracted-honey from Vermont of fine quality. We quote: Comb, 14@18c; extracted, 7@9c. Beeswax: None in market.

BLAKE & RIPLEY, 57 Chatham St.

ALBANY, N.Y., July 24.—Demand for honey slow, supply light. We quote: White comb, 15@16c. Extracted, white, 8@8½c. Beeswax, scarce and in demand at 28@30c.

H. R. WRIGHT, 326-328 Broadway.

NEW YORK, July 24.—Demand fair, and shipments from the South increasing. We quote: Choice comb, 14@15c. Extracted—Florida, 7@7½c; California, 7@7¼c. Southern, 75@85c per gallon. Beeswax, supply increasing; no demand; 27c.

F. G. STROHMEYER & CO., 122 Water St.

MILWAUKEE, July 25.—Demand for honey fair; supply moderate. Old-crop honey out of the way, and market in good order for shipments of new. We quote: Comb, 1-lb., 16@18c. Extracted, white, 7½@8c. Beeswax, in fair supply and dull, at 25@28c.

A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO, July 20.—Some extracted and comb-honey has arrived. Crop in California very short, and we expect an active demand soon. We quote: Extracted, 5½@6c; comb, 13@15c. Beeswax scarce and demand light, at 24@25c.

SCHACHT, LEMCKE & STEINER,
16 Drumm Street.

DETROIT, July 25.—Demand for comb-honey is slow and supply light. We quote: Comb, 13@14c; extracted, 7@8c. Beeswax in good supply, and light demand, at 27@28c.

M. H. HUNT, Bell Branch, Mich.

CHICAGO, July 25.—Honey market quiet, and shipments increasing. A fancy white comb, in clean package, will find ready sale at a high figure. We quote: Comb, 15@17c. Extracted, 6@8c. Beeswax scarce and in good demand at 27@31c.

J. A. LAMON, 44-46 S. Water St.

The Honey-Bee: Its Natural History, Anatomy, and Physiology. By T. W. Cowan, editor of the *British Bee Journal*, illustrated with 72 figures and 136 illustrations. $1.00. For sale at this office.

When Writing a letter be sure to sign it. Too often we get letters with the name of the post-office, but no County or State. One such came recently, and we looked into the Postal Guide and found there were places by that name in 13 States. That order for goods will have to wait until another letter comes to give the proper address. Be sure to stamp your letter, or it may go to the dead letter office.

You Need an Apiary Register, and should keep it posted up, so as to be able to know all about any colony of bees in your yard at a moment's notice. It devotes two pages to every colony. You can get one large enough for 50 colonies for a dollar, bound in full leather and postage paid. Send for one before you forget it, and put it to a good use. Let it contain all that you will want to know about your bees—including a cash account. We will send you one large enough for 100 colonies for $1.25; or for 200 colonies for $1.50. *Order one now.*

We Club the American Bee Journal and the Illustrated Home Journal, one year for $1.35. Both of these and Gleanings in Bee Culture, for one year, for $2.15.

Convention Notices.

☞ The Rock River Bee-Keepers' Association will meet at Sterling, Ills., on Thursday, Aug. 6, 1891.

J. M. BURTCH, Sec., Morrison, Ills.

☞ The ninth annual meeting of the Susquehanna County, Bee-Keepers' Association will be held on Thursday, Sept. 3, at South Montrose, Pa.

H. M. SEELEY, Sec., Harford, Pa.

Removal. — Circumstances have made it to our advantage to remove to more commodious quarters, and we may hereafter be found at 199, 201 and 203 East Randolph Street—two blocks north and one block east of our former location. This move doubles our floor space —of which we now have over 10,000 square feet. Our former location was in the fifth floor of a building, but we now occupy the *third* floor of a building near the corner of Fifth Avenue and Randolph Street. Our friends are always welcome.

◆

Lots of Replies.

During the year 1888, we had an advertisement running in the American Bee Journal, and we had the same in several Daily and Weekly papers, but to our surprise we received more than double the number of responses from the advertisement in the American Bee Journal, than from all our others combined.

The fact that we are still receiving letters referring to our advertisement in the Bee Journal, shows that it is preserved and read long after it is received. Newspapers are read and thrown aside and that ends it, but the Bee Journal is preserved, and the advertisements are often noticed and bring responses long after they appeared in it.

We regard the American Bee Journal as a first-class advertising medium.

Cedar Rapids High-Speed Engine Co.,
Henry Rickel, *President.*

◆

Punctual.—I was surprised to receive the feeder as soon as I did. I like it very well. I receive mail matter in a shorter time from you than from Carlisle, O., only eight miles from here.

John H. Rohrer.
Tippecanoe City, O., July 16, 1891.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line,** for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

FOR SALE.—Thirty colonies Hybrid Bees, in 10-frame Langstroth Hives; all straight combs, built on foundation. Price, $4.00 per colony. Can be shipped at once. JESSE FAIRCHILD, 1241 Homan Ave., Chicago, Ills.
3Atf

FOR SALE—A Foot-Power Saw, nearly new.
G. M. WHITFORD,
5A1t Arlington, Nebr.

Advertisements.

EXTRA THIN

COMB FOUNDATION,

IN 25-POUND BOXES.

WE CAN now furnish the **Van Deusen** extra thin flat-bottom Foundation, put up in 25-pound boxes, in sheets 16½x28 inches, at $13.75 per box, 12 feet to the pound.

☞ The above is a **SPECIAL OFFER,** and is a **BARGAIN** to all who can use that quautity. All orders for any other quantity than exactly 25 pounds (or its multiple) will be filled at the regular price, 68 cts. per pound.

THOMAS G. NEWMAN & SON,
199, 201, 203 East Randolph St., CHICAGO, ILLS.

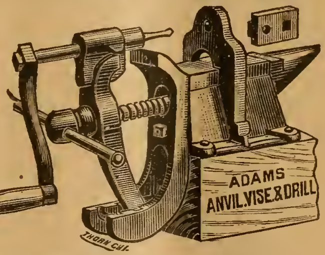
Special Mated Queens of the 5-banded variety. We have a lot of drones from 2-3 to 5-6 yellow that will soon be the only drones near here, and will sell Queens mated with them at our regular price: One Warranted Queen, $1.00; 6 for $5.00. A good many of these Queens will be equal to any Queen you can buy for $5.00, and ALL are warranted to be purely mated. Our bees won first premium at the Illinois State Fair in 1890. The Judge said they were the quietest on exhibition, and the drones the yellowest he ever saw. The goldens are gentle, good workers and the best bees, all things considered, that we know of. Safe arrival and satisfaction guaranteed. NO FOUL-BROOD.
1D24t **S. F. & I. TREGO, Swedona, Ill.**

Mention the American Bee Journal.

COMBINED

ANVIL, VISE AND DRILL

The Handiest Tool in Use about a
FARM, SHOP, OFFICE OR HOUSE.



Price, Complete, $3.00.

The Drill Attachment can be put on or taken off instantly. Farmers especially will find it of great convenience to be able to drill a hole through a piece of Iron without making a trip to town. The Anvil and Vise combine strength and durability, the whole making one of the most complete and useful tools. Width of Jaw, 1¾ inches.

THOMAS G. NEWMAN & SON,
199, 201, 203 East Randolph St., CHICAGO, ILLS.

"A Year Among the Bees"

—BEING—

A talk about some of the Implements, Plans and Practices of a Bee-Keeper of 25 years' experience, who has for 8 years made the Production of Honey his Exclusive Business.

By Dr. C. C. MILLER.

Its descriptions commence with the necessary work in the spring, and run through the entire Year, detailing the methods of doing, as well as telling when to do, all that should be done in the apiary. It contains 114 pages, and is nicely bound in cloth.

Price, 50 cents, by Mail

Or it will be Clubbed with the AMERICAN BEE JOURNAL for one year, for only **$1.35.**

THOMAS G. NEWMAN & SON,
CHICAGO, ILL.

BEE-KEEPERS' SUPPLIES!

WE are prepared to furnish to Bee-Keepers all kinds of Supplies promptly, and at lowest rates. Correspondence solicited and estimates gladly furnished. Our goods are all made of the best material and are FIRST-CLASS in every respect. Catalogues and Price-Lists free. Reference—First Nat'l Bank, this place.

Address **WM. McCUNE & CO.,**
43D1y STERLING, ILL.

Mention the American Bee Journal.

FARMERS, ATTENTION!!

American Farm and Game Laws

—BY—

HENRY AUSTIN, of the Boston Bar.

A valuable book for Farmers, pertaining to the law of all the States affecting their interests. This volume will be a good investment for any farmer, and should certainly be purchased by every Farmers' Club and Grange Library.

As one of the leading Agricultural Magazines says, "We do not know of a book which would be more useful, or save a farmer more money in the long run than Mr. Austin's."

Sent to any address on receipt of price ($2) by

THOMAS G. NEWMAN & SON,
199, 201, 203 East Randolph St., CHICAGO, ILLS.

HOG CHOLERA AND CHICKEN GAPES

IF YOU send 10 one-cent stamps, I will send by return mail two simple recipes, which **never fail to cure and prevent**, without further cost to you, hog cholera and chicken gapes. Address **GLENDALE FARM,**
5A1t GLEASON, TENN.

Mention the American Bee Journal.

Warranted Italian Queens!

Bred from the best strains to be found, and every Queen warranted to be purely mated with drone from a different strain. Safe arrival guaranteed. See advertisement in BEE JOURNAL of June 18. Price, 75 cents each.

J. F. WOOD, NORTH PRESCOTT, MASS.
1Dtf

Mention the American Bee Journal.

BEESWAX WANTED.

Beeswax—We will pay **25 cents** per pound, in Cash, for Yellow Beeswax, delivered here.

☞ To avoid mistakes, the name of the shipper should always be on each package.

THOMAS G. NEWMAN & SON,
199, 201, 203 East Randolph St., CHICAGO, ILLS.

FREE HOMES At the rate they have been going the Public Domains will all be gone in 5 years. Now is the time to secure as Rich Land as the Sun shines on at **$1.25 per acre.** What better could be left for Children? Where these Lands are; how to get them, as well as for information of all States and Territories, send **10 cents** and receive the beautiful Engravings, a Picturesque Panorama of the United States. Address **THE WESTERN WORLD, Chicago, Ill.**

Mention the American Bee Journal.

We've Got 'Em! **Golden Italian QUEENS!** Bees work on red clover. Untested, 70 cents; 3 for $2.00. Tested, $1.10; 3 for $3.00. **Circular of Supplies** free.

JNO. NEBEL & SON, High Hill, Mo.

P. S.—Hon. J. M. Hambaugh, of Spring, Ills., says: "Your Queens are DAISIES. Send 12 more," for $7.00. 7Dtf

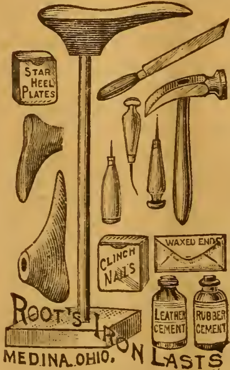
Mention the American Bee Journal.

Wet Feet, a Cold, Doctor's Bill

DEATH AND FUNERAL EXPENSES, COST ABOUT **$200.**

Root's Household Repairing Outfit,

Costs $2. Take your choice.



This Outfit is a combination of practical, tried, common sense Tools and Materials that will enable anyone with ingenuity enough to drive a nail, to do his own half-soling, boot, shoe, rubber and harness repairing, right at home. No pegs required. Simple wire clinch nails. Saves time, trouble, expense and vexatious "shoemaker's promises." Entire Outfit, neatly boxed, only **$2.00.** Send for descriptive Circular to

THOMAS G. NEWMAN & SON,
199, 201, 203 E. Randolph St., CHICAGO, ILL.,
BY WHOM IT IS FOR SALE.

THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

Our Club Rates are: $1.90 for two copies (to the same or different post-offices); and for THREE or more copies, 90 cents each.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVIII. Aug. 6, 1891. No. 6.

Editorial Buzzings.

The honey-bee has a golden coat,
A buzz much like a rocket;
And, O, ye foolish! heed the note!
A loaded pistol pocket.

◆

Samples of foul-brood, or what is supposed to be foul-brood, should never be sent through the mails. It is unsafe to do so; endangering the apiaries of those to whom it is sent, as well as others in the vicinity.

◆

Two Punic Queens are received from Mr. John Hewitt, of Sheffield, England. One was dead, but the other was in good condition. The bees which accompanied the queen were very lively, and appear to be very energetic workers. They are shiny black, and very distinctive in that matter. The queen was introduced in accordance with the printed instructions sent by Mr. Hewitt, and her progress will be stated in the BEE JOURNAL from time to time.

Iowa.—The Ninth Annual Convention of Iowa bee-keepers will be held in their tent on the Fair Grounds, at Des Moines, on Sept. 1 and 2, 1891. Addresses will be given on the following subjects: Spring Dwindling, C. D. Levering; Stray Straws on Wintering, E. Kretchmer; The Best Bees for this Country, J. W. Bittenbender; Bees and the Farm, W. M. Bomberger; Is Bee-Keeping a Suitable Occupation for Women, Mrs. C. S. Jackson; Address by the President, Eugene Secor; Some Problems in Apiculture, Prof. Herbert Osborn; Prevention of Swarming, C. P. Dadant; Lights and Shadows, Maude Meredith. Let there be a large attendance, and a lively interest in the proceedings.

◆

Bees and Fruit.—The *National Stockman* quotes what we stated in the Honey Almanac on the above subject, viz.: that "bees are the best friends of the growers of small fruit; they fructify the flowers, and cause the fruit to mature. Were it not for the bees and other insects to fertilize the flowers, the trees and vines would cease to bear fruit, and become useless." It then adds the following paragraph:

> This is a very important matter to bring before fruit-growers, that the truth of should be properly understood. It is an undeniable fact that without this source of impregnation of the blossoms, fruit could not mature to any profitable extent; hence, while we undergo a slight damage by them, we owe a heavy debt to these useful insects.

That is just what should be done. Let the matter be discussed thoroughly at horticultural conventions, and it will then be very soon understood that bees are the *best* friends of fruit-growers.

◆

It is Not Best to allow the chickens to eat the dead bees around the hives, as they soon get to liking them so well that they do not stop at dead ones, but pick them off as fast as they come out of the hive.—*Exchange.*

A Fair Price. — A correspondent asked Mrs. L. Harrison this question :

> What do you consider a good price by the crate for the very best white clover honey, in one and two-pound sections ?

She replied through the *Prairie Farmer* thus :

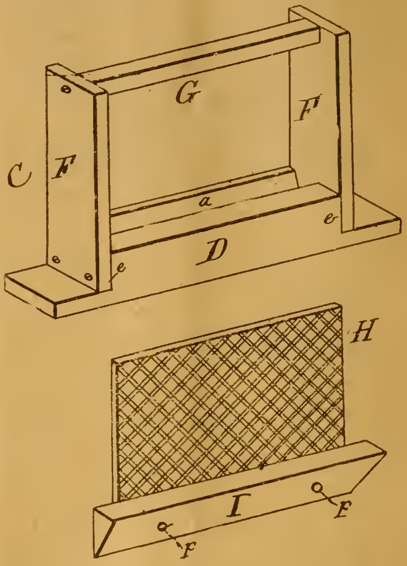
> I would like to ask the querist what he considers a fair price for a pound of butter. Some years it ranges all the way from 10 to 40 cents per pound ; the price is governed by the law of supply and demand. And is there any reason why honey should not be governed by the same law ?
>
> There has been but a light crop of honey in many localities for several years, owing, in a measure, to long protracted drouths. During the past Winter, in Peoria, choice crates of white clover honey, in pound sections, brought 20 cents per pound, and two-pound sections about the same figures per pound. There was no choice, owing to the scarcity, seldom any being offered at all.
>
> I have seen choice white clover sections sold at retail by producers who were forcing it upon the market. Those bee-keepers who were producing honey during the war, and for a few years subsequent, can never forget the high figures then obtained, and since have been watching the decline in price with anxiety.
>
> Honey is not a staple article, like butter and potatoes, and may never become one, as many families never use it at all.
>
> A producer may create a market, and when he has educated the people to use it, and the demand has been made, another person knowing of it will bring in a large supply, and undersell him, which is not obeying that good old Golden Rule, " Do unto others as you would that they should do to you."

We hope that no bee-keeper will presume this year to break down the prices in the way mentioned by Mrs. Harrison. We know that such has been done, but is a very foolish practice. Let all honey-producers keep prices stiffly up to the market standard, and thus reap the just reward of their labors.

* * *

Death has claimed our old friend Henry Unger, of Rochelle, Ills. He had reached the age of 65 years.

Early in the present year Mr. Grubb, of Nebraska, obtained a patent on a "comb frame for bee-hives," which, on page 181, we described, and added : "There was absolutely nothing to patent —the same having been in use for years." It consists of a deep top-bar, having a V-shaped cut in it to receive the comb foundation, and then a smaller V-shaped piece of wood is tacked on the foundation, to hold it in place, as will be seen in the engraving.



We know that it is an old plan ; we have repeatedly seen it in use, but cannot now recall the places where it was seen. Will any one having used such please report, at once, and thus substantiate our words ?

* * *

Samples of Punic bees are received from E. L. Pratt, Beverly, Mass. They are well developed and very lively. Mr. Pratt says they are bred from stock which he has imported from Africa. It is interesting to study the "hardiness" of the samples of bees sent to us. Some which were received two weeks ago are lively, while others which came a week later are all dead. The food, perhaps, is the cause of the early demise of the latter.

The Weather is no doubt responsible for much of the trouble with nectar secretion and the poor quality of the fruit crop. Not only are honey-producers complaining, but horticulturists also are doing their share. The cause for the failure of the fruit and honey crop is thus stated in Vick's magazine for July:

> The first six months of 1891 passes into history, and the chronicles of these months show in an unusual manner the precarious character of horticulture, in some of its branches at least, as pursued in this country.
>
> The past year and, so far, the present one, form an eventful and trying term for this industry. Farm, garden and orchard crops last year had a hard struggle with weather conditions, insects and fungous diseases, and with courageous hearts the work was taken up this season with the hope of more propitious skies; a hope which, it seems, is not to be realized.
>
> If we look abroad we find that in some parts of Europe the inclemency of the weather is equally as great as with us, and that farmers and gardeners there are engaged in as great a struggle as are ours; and, no doubt, if we were in wide correspondence on this particular subject, we should find that, with minor exceptions, the weather conditions of the whole globe are at the present time unfavorable to horticultural interests,
>
> The meteorological conditions of the earth dependent upon, and governed by, the central force of its system, the sun, feels and responds to every change that occurs in that great source of light, heat, electricity and vitality.
>
> Accurate observers show that at the present time the sun is undergoing great and rapid changes, and that to these changes are due the great fluctuations of the weather on our planet. In a word, then, this is the explanation of the extremes of temperature and humidity which we are now experiencing.

Writing of this subject in New York *Truth*, Blakely Hall records some interesting facts:

> I had a view of the sun through the telescope of an astronomical friend the other day, and it really interested me very much, he writes. The huge black holes in the great white globe, which my friend assured me were thousands of miles across, and which looked as though they had been smashed through regardless of consequences, rather startled me. And the glowing patches that outshone the general surface and covered millions of square miles assumed a good deal of interest when it was known that they were, in the words of my friend, "like tremendous waves of white fire driven into crests hundreds of miles high."
>
> "Do such storms on the sun have any effect upon the earth?" I asked the astronomer.
>
> "They make the magnetic needles jump," he replied, "and often set auroral lights gleaming in the atmosphere—that much is certain. Just how they do it nobody knows. It is electricity; some kind of an electric impulse is communicated from the sun to the earth when the former is convulsed with explosive forces."

◆

Golden Carni-Italians.—J. A. Roe, of Union City, Ind., has sent us a sample of what he calls Golden Carni-Italian bees. The bees are the progeny of a Golden Italian queen mated to a Carniolan drone; and, strange as it may seem, such a cross retains the bright yellow of the Italians, to which is added the silver markings of the Carniolans, making very beautiful bees. As these bees are quite large, we may fully expect them to be good workers. Mr. Roe will be pleased to send a sample of these bees, with his queen circular, giving further particulars about them, to all who will send him their address.

◆

The Medals which are to be used by affiliated Societies are now being made, and they are beautiful as well as appropriate. They are to be used by the local Societies as awards in the Bee and Honey Department of Fairs or Exhibitions. We hope to present an engraving of both sides in our next issue.

◆

The North American Bee-Keepers' Association is now incorporated, and is a legal body known to the law.

◆

Clubs of 5 New Subscriptions for $4.00, to any addresses. Ten for $7.50.

Mr. Honey Bee's name and address seems to be wanted by some over-zealous legal gentlemen. The Kansas City (Mo.) *Journal* recently contained the following amusing item :

> The Supreme Court in Central New York has decided that honey-bees who go upon other clover fields than those of their own are tresspassers, and subject to the penalties of the law. This may be a very learned decision, but how is it to be enforced? To arrest a tresspassing bee and ascertain its owner's name and residence would be a delicate task.

Then the New York *Press* took up the refrain in this way :

> The recently-reported decision of the General Term of the Supreme Court in the central part of the State, declaring it trespass for honey-bees to go upon lands not belonging to their keeper, is enough to make the late Canute, King of Britain, turn in his grave, with bones green with envy.
>
> Is each bee to have a little tag fastened around its waist by a delicate little wire? or are bee-collars of brass to be a staple article of Central New York manufacture? And will the statute gravely enact that "any bee found roaming at large, or caught trespassing outside on the flowers of any person not its owner, will be put in the pound until redeemed by the payment of one dime?"
>
> In default of the payment of the dime by the owner, the owner being presumably notified by the publication, through advertisement in the local newspapers, of the number found on the bee's tag or collar, the bee will probably be put up at auction and sold to the highest bidder. This will require the creation of several local offices, and a bee-pound will be a necessary annex to the office of every country Justice of the Peace.
>
> It is the solemn duty of the *Press* to protest against this circumscription of the liberties of the bee. Had the bees of ancient Greece been numbered, registered and tagged, they would never have tried to suck honey from Zeuxis' painted flowers, or alighted on the lips of young Xenephon. Had the bees of "Merrie England" worn collars in the days of good Dr. Watts, they never would have inspired that classical lyric of our childhood, "How doth the liitle busy bee," etc. For the Doctor would have seen that the bee was a slave and a creature of circumstances, busy only because it had to be, and he would never have held it up for admiration as a model. The General Term of the Supreme Court should go to the bee, consider her ways and be wise.

All this is concerning the decision of that six-cent lawsuit in Hobart, N. Y., a year or two ago. "Funny, isn't it?"

* * *

The Ontario Agricultural and Experimental Union commenced to make a series of experiments, and have issued the following circular :

> You are hereby respectfully requested to join in an experiment which we consider of practical value in apiculture. The experiment is as follows : Testing to what extent, if any, the bees thin out the septum, or base of comb-foundation, before storing the honey in the comb, and what effect various thicknesses of foundation has upon the thickness of base finally left by the bees.
>
> We propose to supply, free of charge, until our funds are exhausted, three thicknesses of comb-foundation, known as medium brood, thin surplus, and extra thin surplus, of each kind six pieces sufficiently large to fill 4¼x4¼ sections.
>
> One of each thickness is to be put in sections, taking great care to keep each kind separate, marking on the side of section not exposed to the bees the kind of foundation it contains.
>
> The sections (one of each kind) are to be placed over the central part of the brood-chamber, say, among the six central sections in a half story, or if in deep frames in the lower tier of sections, and in the central frames ; no sections next the outside of super.
>
> After the bees have stored honey in the sections, the honey is to be extracted, and the three empty sections sent by mail to R. F. Holtermann, Brantford, Ont., with the attached slip carefully made out.

* * *

Honey-Dew is the exudations of insects which live upon the leaves of certain trees ; this year the soft maples were badly infested, and a crop of honey-dew was the result. One season, a few years since, these insects damaged the maples very materially, the little twigs looking as if wound with cotton. The result was that the white clover honey was damaged, as there were cells of it scattered through what would have been choice white sections.—*Exchange.*

Queries and Replies.

Size of Brood-Chamber for Wintering.

QUERY 778.—If you desired a brood-chamber expressly for the welfare of bees during the Winter (on the summer stand), of what dimensions would you prefer to have the same?—Penn.

A 1-foot cube.—G. M. DOOLITTLE.

The same as a 10-frame Langstroth. —EUGENE SECOR.

About 1,650 or 1,700 cubic inches. —J. P. H. BROWN.

About 2,000 cubic inches, and nearly square.—J. M. HAMBAUGH.

I prefer the Langstroth hive for all purposes.—MRS. L. HARRISON.

Perhaps the best size and form is 14x14x14 inches.—M. MAHIN.

I really do not know. I think I would take the old straw skep.—C. C. MILLER.

As small as possible to accommodate the wants of the entire population.—DADANT & SON.

I would make the hive 15 inches square, and 16 inches deep, or thereabouts.—C. H. DIBBERN.

Do not care, but should like to have the hive raised on a rim 3 inches from the bottom-board.—A. J. COOK.

If the sole object were to winter the bees, I think a box-hive, a foot square and 18 inches high, would be as good as any.—R. L. TAYLOR.

All things considered, the standard Langstroth hive, with frames 17⅝x9⅛ inches will produce as good results as any hive—and results are what we are after.—H. D. CUTTING.

I prefer, at all times, the ordinary 10-frame Langstroth hive. I have always wintered my bees on summer stands, and find that the 10-frame hive will winter a *small* colony just as well as will a smaller hive.—J. E. POND.

The capacity should be large, say, 13 Langstroth frames, or, what is preferable, a two-story hive of brood-chambers 7 inches deep, with a capacity for 1,660 square inches of brood-comb. Colonies in such hives winter better, come out stronger in Spring, and build up faster than any other.—G. L. TINKER.

I know of none better, and few as good, as one case of my divisible brood-chamber hive; 8 combs, 5 inches deep by 7½ inches long. Shallow, narrow brood-chambers are best, for obvious reasons—experience corroborates this view.—JAMES HEDDON.

Just the size of the standard Langstroth frames, 17⅝x9⅛, 10 frames to the hive. There is no better division-board than a comb filled with honey. I know that I stand nearly alone in this matter, but I am thoroughly of the opinion that bees do better in a full size hive in Winter than when crowded on a few frames. It is simply unnatural to bees to be crowded in Winter. Their nature and habit is to draw up into a compact cluster so that the air can pass all around between the cluster and the wall of the hive.—G. W. DEMAREE.

The Langstroth hive we perfer for all purposes—Winter and Summer.—THE EDITOR.

Better than Alfalfa.

I take the liberty of sending the enclosed plant, and would like to learn its scientific and common name. It has proved to be by far our most productive honey plant—more so than the cleome, of which we have an abundance, or, considering the amount of it, better even than our alfalfa. The bees work on it about the first thing in early Summer, and keep working on it every day until the last thing in the Fall.

GEO. H. EVERSOLE.

La Plata, N. M.

[The plant sent by Mr. Eversole is known in science as *Goura coccinea*. I know of no common name. It is very closely related to our excellent honey plant *Epelobium angostofolium*, or fireweed, or tall willow-herb, and so we would expect good things of it. It belongs to the evening primrose family.—A. J. COOK.]

France.—The fact that the Government so cordially and readily accepted the invitation to take part in the World's Columbian Exposition at Chicago, is matter of wide-spread satisfaction, which is daily growing all over France. —*Les Debats*, Paris, France.

Topics of Interest.

Preventing Egg-Laying in the Sections.

G. M. DOOLITTLE.

A correspondent wishes to know how brood can be kept out of the section boxes, and why such a state of affairs is more prevalent than years ago. Years ago, when all the hives in use contained 2,000 or more cubic inches, brood in surplus boxes was of rare occurrence, as our correspondent suggests, but since the apiarists of our land have come to cut down the size of the brood-chamber to less than two-thirds of the size which was formerly used, so as to get a larger surplus of comb-honey, brood in the sections is of quite common occurrence.

Nothing is more provoking to an apiarists, when he goes to a hive expecting to find all of the boxes filled with nice white honey, than to find them filled with honey down to within an inch or two of the bottom, as he expected, and the rest filled out with brood.

Another thing which causes this state of affairs to exist is the excluding of all drone comb from the brood-chamber, for bee-keepers have learned that the rearing of hosts of drones is one of the reasons that more honey was not formerly obtained. Bees will have drones, and if they cannot secure them in any other way they will cut down worker comb and build in drone, still if any drone comb is on the sections they seem to prefer to have the queen "go up stairs," and lay in the honey apartment, rather than cut down comb already built.

TO KEEP THE QUEEN BELOW.

Now, there are three ways of keeping the queen down below, where she belongs; the first of which is a large brood-chamber, as has already been hinted at. But as this is a kind of remedy that is a loss to the bee-keeper, no one thinks of using such a hive at the present time. About the time that contraction of the brood-chamber began to be thought of, comb-foundation was invented, and it soon became apparent that if the queen could not find any drone comb in the surplus chamber, where the bees were averse to brood in any event, the remedy would be complete.

Then, again, honey stored in worker comb presents a much finer appearance, so we were not long in deciding that if we would reap the best results we must fill our sections with worker foundation, which the larger part of our bee-keepers do to-day. But contraction became a fever in the minds of some, and was carried to such an extent that the queen had not room enough left below in which to indulge her egg-laying capacity, even for worker brood, so we had sections filled completely full of worker brood.

Not to be foiled, bee-keepers soon brought into use perforated zinc, the perforations of which were so nicely made that they would readily allow a worker to pass through it, but when the queen came to try the same thing she could not get through. In this we have a perfect thing, so where a perforated honey-board is used it is impossible to have brood in the surplus apartment. There has been quite a little theorizing regarding this method of keeping the queen where she belongs; some claiming that not so much honey could be obtained where the bees were compelled to pass through so small an aperture to reach the sections, "for," said they, "bees are often loath to enter the surplus boxes anyway."

However, time, that prover of all things, has shown that these theories are false, for facts prove that as much honey is stored where perforated honey-boards are used as is stored without them, and they are beginning to be considered a necessary part of bee-keeping, whether we work for comb or extracted-honey. But it was soon found that all-metal honey-boards were too expensive, and that they would be kinked and warped by use; so again the inventive genius of the apiarist was called into play and we had a combination of zinc and wood, which gave us a much better board, in that it was more rigid and not so liable to get out of shape; besides it was much cheaper and answered the purpose equally well.

IF YOU HAVE NO HONEY-BOARDS.

But some may say, "All very well, but I am not so prepared for this season; what am I to do if I find brood in my sections?" Well, there are two or three ways of working when brood is found in the sections, and it depends somewhat on the stage the brood is in when found. If in the egg or larva form, take the sections off the hive and carry them to the cellar, leaving them there for four or five days till the brood spoils, when they are returned to the hive, and if the queen does not enter them again they will be filled and look as well as if no brood had ever been in them, for the bees will remove every particle of offensive matter making all as good as new.

If the brood is capped over, take a honey-knife and shave off the brood down to within one-fourth of an inch of the septum of the comb, and return it to the hive. The bees will now clean it up and build out the cells again the same as they would work out the foundation, but the honey will not have quite so nice an appearance as it would if the brood never had been in. Then the brood can be left till the bees hatch out, and if the season holds out the comb will be filled with honey, which will have to be sold as second quality, this being better than nothing.—*Stockman and Farmer.*

◆

Where the Honey is Stored.

C. W. DAYTON.

In the accompanying diagram the square designated by A, A, is the space occupied by a 7-frame (Langstroth size) brood-nest, viewed from the ends of the frames.

The circle B, B, within the square, shows the position of the brood, as the bees naturally place it.

The exact point at which the bees begin to store honey is located at H, which is at the upper margin of the brood. Proceeding from H, the storage of honey is always the same at any distance or direction from it.

If two racks of sections, with their bee-space above the brood frames be placed above the brood-nest, the inclination to store honey in them, and in other parts of the hive, is as represented by the large circle, C, C. The bees store honey as readily at one C, as at the other.

Where the brood and honey come together at H there is a conflict, and this causes the upper side of the brood-sphere to be flattened so that the brood is broader horizontally than obliquely, and for this reason honey will be as readily stored at the points D, D, as at C, in the upper part of the diagram. In other words, the space at D is more useful for the storage of honey than upper C, and on this account 7 frames *full of brood* are nearly an exact equivalent to 8 frames, as we usually find them.

With a colony in a 7-frame brood-nest (equivalent to 8 frames) the bees enter the surplus above by a passageway less than 11 inches wide, while if the lower hive should be widened to the dotted line D, D, the amount of brood-space that adjoins the surplus is 2⅝ times as much, and the tendency of the bees to put honey outside the brood-combs is more than twice as much from the three sides together as from the one alone,

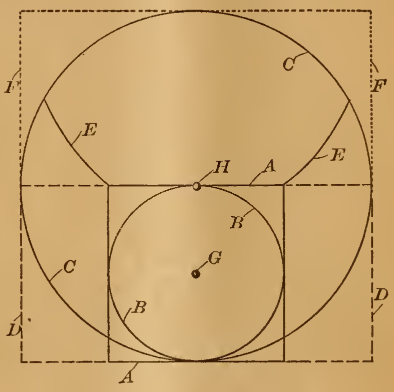
Again, in order to put honey above the brood-nest the bees must pass over an apparently vacant space, or through a honey-board, which is a hindrance, when, in side storage, it only requires the passage from one comb to an adjoining one in the same apartment.

Here I wish to call the reader's attention to the size of hive to use.

THE SECRET IN LARGE HIVES.

The 8-frame hive we have represented by the boundary line A, A. If the number of combs be increased to 12 or 14, the hive will be widened out to the dotted lines D, D.

By prevailing contraction systems, these added spaces were filled up with dummies, and so few combs remained in the lower hive that, at the beginning of the harvest, the bees were crowded through a honey-board into a dry, uninviting chamber, while, on the other hand, and in the case of large hives, the bees were coaxed along from comb to comb in the lower story until they have stored one-third to one-half a crop, and the duration of the harvest one-half gone.



Now, it is a rule that when the honey harvest has continued 10 days, the colonies, though full of brood and bees at first, are twice as populous as then, and the hive, even if it be of large size, is literally boiling over with bees.

At this stage of the harvest no one complains that the bees are not in the supers, but the complaint is that they do not begin in the supers until the harvest is partly gone.

In using small hives the sections are filled first and Winter stores secured later, but with large hives it is just the reverse.

Clinton, Wis.

How Can Producers Reach the Trade?

DEMA BENNETT.

The title presupposes that you will have the honey to dispose of, and as it takes pretty good management to secure honey in these latter days, in the way of having your bees strong at just the right time, and having your dishes right side up, etc., I conclude that nothing need be said on the point of producing the honey, except as it may refer to the subject under discussion, through the quality or appearance, which must necessarily begin to be effected while still in the hive.

For comb-honey, I believe that the section-holder, which is a topless wide frame holding one row of sections, is the best thing for the purpose that I have ever seen. I will quote from "Ernest's Notes of Travel," in *Gleanings*, page 57: "It protects three sides of the section from the travel of the bees...... We pulled over several piles of T supers. In all, I noticed the bees had chinked in considerable propolis between the *edges* of the sections." I am glad to know that I shall have at least one on my side of this feature of the subject.

By using these section-holders, you can wedge them up or use a "dummy" so as to keep the sections nice and bright; consequently, you do not have as much scraping of propolis, which is sometimes accompanied by the slipping of the knife into the honey, and "thumb marks" on the sections, which prevent it being rated as a first-class article.

For extracted-honey, I would advise using combs of worked-out wired foundation; this makes them strong, so there is no danger of breaking them out of the frame. Some think that old combs do not make any difference in the color of honey. I used to think so, too, but I do not any more, and you know that when one changes their opinion, they do not ever get quite back to the original position again.

Put water into old combs, allow it to remain awhile, and then shake it out. Remember how thin honey is when it is brought in fresh from the flowers, and if it did not soak some color out of the combs, as water does, it would be a miracle. Honey should be left in the hive until pretty well sealed before extracting, then when drawn from the extractor it should be put into a deep storage can (the ripened honey, being heavier, will settle to the bottom of the can, and leave the thin honey on top to ripen), and allowed to stand, with only a cloth tied over it, to keep out the dust and let in the air, until thoroughly cured.

HOW TO REACH THE TRADE.

First. You must make people want to buy honey.

In what way? By educating them up to understanding something of the nature of honey, its value as an article of diet, and the comparative cheapness between it and sauces for the table, which must be prepared at a cost of much time and trouble, sweetened, and then cooked; while honey goes farther, and is always ready.

Second. You must make the dealer prefer to buy of you rather than from any one else.

How can this be done? By convincing him that you have a fine article for sale, and that you are a reliable person from whom to purchase. To secure the former, great care must be taken in selecting and preparing the goods for market.

Of course, you all know that I am not a honey-producer, but I have had several years' experience at "Welcome Apiary," and will tell you how we prepare honey for market. Comb-honey is sorted into three lots—the nicest ones are picked out as being "gilt edged," or No. 1. We scrape the propolis off, label the top of the section, encase each one in a carton (which is a folded pasteboard box), and place in single-tier shipping cases, being very sure not to have any leaky ones, for they would discolor the paper, which would look badly. On one side of the carton is a cut of the home apiary, and below it is printed a quotation from the Honey Leaflet, published by Thomas G. Newman & Son, Chicago, Ills.:

"Why eat honey? Because it is good food and good medicine. No article for human consumption is more delicious than honey, and none is more beneficial to the human system. Honey is food in one of its most concentrated forms..... It gives warmth to the system, arouses nervous energy, and gives vigor to *all* the vital functions. It is Nature's offering to man—ready for use, distilled, drop by drop, in myriads of flowers, by a more delicate and perfect process than any human laboratory ever produced."

On the reverse side is a square form, with cut of straw hive and the words, "White Clover Comb-Honey; produced by—" (giving name and residence).

The next best sections of honey in appearance—either the section being soiled, or, perhaps, the cells are not all sealed, as some are left at the close of the season, or the capping has been broken so that it leaks a little—are what we call "seconds." These we never label or put in cartons, but scrape carefully, put in shipping cases, and sell for two cents per pound less than the first-class.

The third lot we call culls, and use at home. By a little care in cutting close to the sealed honey, and "putting the best side up," we have quite a presentable dish of honey, and do not demoralize the market by offering it to grocers.

SHIPPING CASES.

A few years ago, large double-tier shipping cases, holding 48 sections, were thought to be just the thing; but now the smaller the better, and a single-tier 12-pound case seems to meet the demands of the trade. (I am speaking of grocers, and not of commission men.) It exposes less honey at one time to the danger of getting dusty by standing, and broken by handling over, and is very much easier to lift about, and families will often take a whole case, when they would get along with two or three pounds if taken out of a large case.

The shipping cases should be weighed with the cover on, and the weight of each case should be marked plainly before putting the honey in, then the gross weight, and also the net weight of the honey should be marked. A cut of the apiary should be pasted on each side of the box, so purchasers can always know where it came from. As new honey is always taken off during the fruit season, we wait awhile before offering it for sale.

In putting up extracted-honey for the drug and family trade, the ripe, liquid honey is drawn into pails of a uniform size—even 10 pounds gross weight—and is left until the honey granulates. Every woman knows how many things she can use nice tin pails for—they always come in place—and buying it in this way she gets the pail at the price of one pound of honey, which is much less than it could be bought for at the hardware store.

For the grocery trade, after trying numberless sizes and styles of package, we prefer a straight, flint glass, one-pound jelly jar, with a rubber band and a screw-tin top, which makes it self-sealing. As it makes a very tidy package, and holds about the right amount of honey for table use, and can be used for so many things afterward, we feel that they get their money's worth every time.

PREPARING FOR MARKET.

For the pails, a large bright-colored label, containing a cut of the apiary and the words "Pure Extracted-Honey, from the apiary of—" (giving name and residence), is pasted on one side, and on the other side, and on top of the pail cover, directions for liquefying the granulated honey.

On the glass package, which is filled with liquid honey, is pasted a small label containing the information conveyed in the labels for the pails. They are then carefully wrapped in paper, to keep them clean, and packed in baskets, the handles of which have been securely fastened, and taken to market right away.

We use the lightest honey only for glass jars, the next in quality being put in pails, but if there should be any very dark honey, it can usually be disposed of to the bakers.

Honey—both comb and extracted—selected and prepared as above, need only be shown to an experienced dealer to convince him that it is really a fine article. The next thing is to convince him that you are a reliable person from whom to purchase—this is especially the case with extracted-honey. How can this be accomplished?

It is customary to present your card, when wishing to introduce yourself to strangers, and acting on this principle, Mr. Hains had some large, bright-colored cards printed, with the cut on one side, and the same quotation from the Leaflet as on the carton, on the other side. In addition, the following is printed: "Extracted-honey is sold for a lower price than comb-honey, because the comb from which it is extracted is returned to the hive to be again filled, thus increasing the quantity and reducing the cost. To secure the largest return for your money, procure from your family grocer a good article of extracted-honey. To insure purity, purchase none except that which bears the name of some well-known bee-keeper —the nearer to your home the better. Extracted-honey that will not candy, or is offered in packages that are not labeled with guarantee of purity and name of producer, should be avoided. To liquefy candied honey, place the package containing it in hot water until the honey is melted. The cut on the reverse side of this card represents the home and one of the apiaries of the person whose name appears in the margin. He has, at present, about 400 colonies of bees, and guarantees the absolute purity of all honey bearing his label."

The dealer cannot very well refuse to take the card, and may say: "Well, yes; I have seen that place in passing on the cars. You must have quite a lot of bees there." Then he will look on the other side. "That is the reason, is it, that extracted-honey is cheaper than comb. I always thought that it was because it was doctored up in some way, and I have always been afraid of candied honey. I do not care if I do have just a few, to see how they go. I will take two or three dozen this time; and, I think you had better leave me some of those cards, too, for I believe that they will help me out with my customers." If he should not say so, I would suggest it to him myself.

HOW TO KEEP THE TRADE.

By square dealing first, last and always. Do not sell to one party a part of your load, and then, because it is getting towards night, and you want to get home, sell to his neighbor across the way for a few cents less per pound if he will clear out your load. Do not put nice sections against the glass, and dark ones in the center. Do not put poor sections in cartons, thinking that they will not be seen until they are carried home, when purchasers cannot help themselves, for they will be sure to tell the grocer of it the next time they call, and say that they do not want any more such honey as that, and that they paid twice what it was worth.

This will not make the grocer feel very good, for he will probably have to "throw in," in trade, much more than the profit on that one piece of honey, and, of course, he will care much more about pleasing that one customer than he will about trading with you; for he paid you just as much as he would any one, and the next time you call on him he will be either "too busy to attend to it," or supplied with all the honey he wants.

Do not put your extracted-honey in packages that are not good for something else when the honey is used up, for notwithstanding the fact that honey is called a luxury, the bulk of extracted-honey, at least, which is sold for table use, is consumed by persons of limited means, and the careful housewife has an eye to the future in buying lard, baking powder, or even honey; be careful that the packages are not reminders of patent medicine, or something else disagreeable. I heard a lady say, not long ago in Cleveland, that she had often seen what she had for a long time supposed to be bottles of castor oil, but on examination she found that they contained extracted-honey, but she did not forget first impressions, and could not be persuaded to purchase any.

Do not put unripe honey on the market in any kind of package, for it will surely sour and be "a snare and a delusion." Do not forget to put labels on all packages of extracted-honey, stating that it will granulate or candy, and telling how to restore it to liquid form without injuring the flavor. Do not put on sale any leaky packages of honey to smear the hands and the counter, to the disgust of every one connected with the establishment.

Having told you what *not* to do, I will mention some things to do to keep the trade: Extend little courtesies—show dealers how to handle honey carefully, and advise them not to have any leaking honey around the store in bee-time, but tell them how they can manage if any accident should occur in that line. Leave some extra labels for honey in case those in use should become soiled before the honey is sold. Sometimes it is well to furnish a glass show-case, or a set of shelves for their use, and arrange the honey in an attractive form for them yourself, and if you had a large photograph of your place nicely framed to hang up with the goods, so much the better. Do not fail to ask the dealer to come out some fine day, and look through your apiary, and give him some cards to distribute among his customers.

In these ways you will have made a friend of him, and while you have any stock on hand, he will not think of looking elsewhere, even if he has to notify you himself that he is about out of some particular style of package of honey, and would like some more at your earliest convenience. And I warrant you that he will not have a huge placard in his window bearing the inscription, "New Strained Honey," placed over a bottle of honey, as I saw last season in the nicest grocery store in Cleveland—because both dealer and customers will know better.

I think that I have fully explained how the trade may be reached and retained, although as Mr. H. F. Moore read a very exhaustive essay on the subject of going from house to house, before our convention last Winter, I have not thought best to speak of that feature of the trade.

Mr. E. France buys 1,000-mile tickets, and travels on the railroads, stopping at all towns and cities along the line one way, and returns by another route, visiting grocers and hotel-keepers, and disposes of large crops in that way.

DO WE NEED A TRADE-MARK ?

It is claimed by a prominent bee-keeper that "it will result in protection to honey-producers, and tend to largely swell the membership of the Union." As to the last part of the statement, I have no word of opposition, and if the question were, "Is it best for the Union to have a trade-mark?" I would say that for the purpose of increasing membership, I should think it might be a wise plan. It is also said that "soon consumers everywhere will be educated to the fact that producers never adulterate, because they cannot afford it, and that they can instantly discern (I suppose by means of the trade-mark) which packages were put up by producers, and which by adulterators or city packers."

The only reason given why "producers never adulterate," is "because they cannot afford it," and it seems to me a very lame one. How is it that bee-keepers, who are of necessity unemployed with their regular business during the time when there is more call for honey than at any other time in the year, without having to pay extra rent, without having to provide extra storage-cans, and with only family help, cannot afford to put in their time in this way, if city packers can afford to pay big rent, and high prices for labor to mix and sell the stuff? Mind, I do not say, or even think, that they will; for I believe that, as a class, bee-keepers are up to a higher standard of moral excellence than those of many other callings.

As I understand it, any one who is not either in, or threatened with litigation, can join the Union by paying the sum of $1.00. I do not know as it is a requirement even to be a bee-keeper, while the supposition might be that only bee-keepers would wish to join.

Now, of the vast number who might join in order to have the use of the trade-mark, it would be very strange if some unworthy persons did not take advantage of this cheap protection, which could not be refused as long as they were members of the Union. Supposing that I had joined this year, and I do not get as large a crop as I expected, and do not feel as if I could pay the dues next January, but have a number of the trade-marks left, would I not be very apt to use them on next year's crop, feeling as if I had already paid for them?

Unless a list of persons entitled to use the trade-mark, should be sent out to all the members monthly, how could they know that some one was not using the trade-mark unlawfully? Besides, would it not cast a reflection on our brother and sister bee-keepers who have not much honey to dispose of, and do not feel able to invest in the trade-mark, and to whom the dealers would say: "Your honey must be bogus, for you have not got the stamp of 'genuine,' as adopted by *all* the reputable bee-keepers of America," and they would have to sell at a low price—a thing we have for years been fighting against, as demoralizing to the trade.

My advice is, make your own name and apiary an honest trade-mark, the genuineness of which shall not be doubted anywhere. The Union trade-mark might be misused—never allow yours to appear on anything which is not exactly as represented both in quantity and quality. Stand on your own merits, and you will not need to push any honest person down. But *do* join the Bee-Keepers' Union. Not merely for your own gain, but to set wrongs against your fellow workers right, and to help punish those cravens who dare, for sordid gain, to degrade our honorable profession, which is the furnishing, in a direct line from the fragrant fields and flower-laden boughs of the orchard and forest to the waiting people, the delicious nectar which the busy bee has so deftly stored in dainty snow-white cups, as honey—that most satisfying of all sweets, whose praises have been sung by poets, and whose virtues have been extolled by sages since the earliest days, "When the world was young."—*Read at the Toledo Convention.*

Bedford, Ohio.

Thunder Storms and the Honey-Flow.

A. F. BROWN.

My experience in regard to the effect that thunder storms have on the flow of nectar in flowers, corroborates that of Mr. Joshua Bull (page 76)—that is, the heavier the storm the lighter the honey-flow the following week.

I also find that when thunder storms are several hours in gathering, the flow of nectar that day will be above the average, as a rule.

In several instances, I have known the gathering of a thunder storm to cause a flow of nectar for several hours preceding the storm, especially from andromeda and saw palmetto.

Thunder storms must not be confounded with warm, mild rains, or, more properly, showers, as the latter rather tend to increase, than diminish a flow of nectar, and the bees work just as well a half hour after the shower as they did before. I have had them gather as much honey on a cloudy day, when there were several showers during the day, as they would on bright, pleasant days.

My experience has been gained by keeping a record of a colony on the scales; noting conditions of the weather, etc.

I also think we have about as heavy and severe thunder storms, here in the South, as in most other sections. Our thunder storms are of two classes: Those that come up and pass within an hour, when the sun is out again as bright as ever; and others that are several hours in forming, and last two or three hours, followed by heavy rains. The latter are the ones that tell on a flow of nectar.

We have only about one-fourth of a crop in this locality, which is due to two or three weeks of cold, rainy weather during the orange bloom, and forest fires destroying most of the saw palmetto; these two sources, being our main reliance for surplus. We have only the Fall flowers to depend upon now, and these are not ceriain.

In other sections of the State, and especially in the black mangrove belt, I understand they are having good yields.

Huntington, Fla.

What to do With Unfinished Sections.

S. L. WATKINS.

Almost every season after the honey-flow has ended, we have on hand a number of unfinished sections. We generally extract the honey they contain, and save these sections for starters, in surplus cases, for another season.

Some bee-keepers practice feeding this honey back to the heaviest colonies, where they have placed all the best sections not quite finished. They are generally successful in securing well-capped, filled-out sections, which pays for all time and trouble.

Great care should be exercised in choosing the colonies that are to do this work. Bees with good, young, prolific queens, where the hives are full to overflowing, are the ones to select.

Place two section cases upon each hive; have the lower case filled with the most finished sections, and the top case with the half and quarter finished ones; next add a top story to the hive, and inside of it place your feeder. The honey that you have extracted, and which you intend feeding should be thinned by adding water, so that the bees may work and carry it away more rapidly; one quart of water to ten pounds of honey is about right (boiling water is best). Feed as fast as the bees can take it up; take off the sections as fast as finished, and add more unfinished ones. When your stock of unfinished sections runs short, reduce the number of colonies that you are feeding; until you have one colony finish what is left.

Contraction is sometimes practiced when feeding back to obtain finished sections. If you use the Langstroth hive, contract to five frames. The time to commence feeding back would be after the last heavy honey-flow, which in some parts of California would be the latter part of June, and in other parts the first of November.

A Chico bee-keeper tells me that he once fed out 1,500 pounds of honey by sprinkling it on the marsh grass near his apiary. He says it was the most satisfactory feeding of bees that he ever did. (He did not feed to obtain finished sections, but simply to supply them with Winter food, as it was an unfavorable honey season.)

SWARMING.

Bees swarm more in a mountainous country than in the valleys.

Of this statement I have had abundant proof. In the Sacramento Valley, along the river bottoms, bees will build up and stay in immense colonies, and finish every section before swarming; and sometimes after their sections are finished, they will commence building comb on the outside of the hive.

But in a mountain location it is entirely different. (I now speak of the Sierra Nevada mountains. I do not know whether it is the same in the mountain ranges in Southern California or not.) When a colony here has the sections about three-fourths finished, out they go; and if the queen-cells are not cut out of the old colony they will swarm themselves to death.

This accounts for the fact that so many farmers who keep bees and do not know much about them, think that the moths cleaned all the bees out, while in reality the bees swarmed too much, and after they were through swarming there were not enough bees at home to protect them from the moth. If the queen-cells had been cut out at the proper time, all would have been well and good, and the colony saved.

When an old colony swarms, we always take the section case with the adhering bees that it contains, and place it on the new colony; sometimes we place the new colony where the old one stood, and thus catch all the old returning field bees, which generally makes a rousing colony for business, and they soon finish up the sections in good shape.

After the young colony has been in the hive a month or so, and they have things pretty well fixed up, they commence building queen-cells, and make preparations for swarming, and if they are not "nipped in the bud," they will swarm themselves down so as to be almost worthless.

It takes a great deal more care and attention to run an apiary in the mountains than it does in the valley.

CAGING QUEENS DURING A HONEY-FLOW.

Will it pay to cage the queen during a heavy flow of honey, is a question that is yet unsolved by many bee-keepers. Some claim that it pays well in dollars and cents, while others think it is a disadvantage and no profit is derived from this practice at all. I think the secret of it is in the location; some locations, after the main honey-flow, have no smaller ones to follow, and it is in such locations that removing the queen will pay.

The queen should be caged about two weeks before the honey-flow. She may be kept in a small nucleus hive, with two or more frames of adhering bees. In ten days all the queen-cells should be removed from the colony and a frame of larvæ inserted, with which the bees will rear another batch of queen-cells, which will keep them occupied about ten days longer; by that time you will be ready to give them their old queen again. Go to the nucleus hive where you put her, and lift out the two frames and place them in the old hive again.

The bees, after having their queen removed, work just as well without a queen as with one; because they have all the material necessary to make a queen, and, of course, they are in a perfectly natural condition, and will just rush the honey in and fill every cell as fast as the young bees emerge. The old colony, you see is getting stronger every day, and about the time the honey-flow ceases, all the first or original brood will be hatched. Of what use afterwards is the great number of bees that would hatch, if the queen had been left in the hive! They would simply be consumers, instead of producers; for after the honey-flow is gone, there would not be anything for them to do. Swarming is controlled to a great extent, too, by removing the queen. When running for extracted-honey removing the queen is bound to be a success in certain locations, and it will also be a great aid in the production of comb-honey.—*Pacific Rural Press.*

Grizzly Flats, Calif.

Ohio at the World's Fair.

ERNEST ROOT.

The Ohio State Bee-Keepers' Association at Toledo appointed Dr. A. B. Mason, C. F. Muth, and J. B. Hains to look after the securing of an appropriation by the State to provide for the expense of Ohio's apiarian exhibit at the Chicago Exposition.

A few weeks ago, with this purpose in view, the Doctor made a trip to Columbus and interviewed the Commissioners of the World's Fair. One of them wrote him a letter, saying that they would have another meeting in Cleveland, on Thursday, June 4, and suggested that then would be a good time for representatives of the Ohio State Bee-Keepers' Association to be present and state their needs.

Accordingly, Dr. Mason, Mr. J. B. Hains, Miss Bennett, J. T. Calvert, and E. R. R., by appointment met at the Hollenden Hotel, whither, also, the Commissioners of the World's Fair were to meet at 10 am.

After holding a short preliminary consultation, it was agreed not to ask for any stated sum of money by way of an appropriation for the bee and honey interests, and that we would request the Commissioners to put the whole matter into the hands of the Ohio State Bee-Keepers' Association. We then repaired to a parlor where the Commissioners were in session.

At the proper time Dr. Mason, as spokesman, arose, and after stating what the bee-keepers of other States were doing, and the importance of the bee and honey interests of the State, and the number of bee-keepers, requested that the Commissioners put the whole matter into the hands of the State association. As soon as the association knew that they were to have charge of preparing and caring for the exhibit, they would proceed to look after details.

Dr. Mason was just the man to state our case. He made his modest little speech to a body of picked men. This body was made up of some of the best men in Ohio, full of business and vim; among them the Vice-President of the Baltimore & Ohio railroad, Capt. W. W. Peabody, the Chairman of the Board; Mr. Ritchie, and Hon. Harvey Platt, United States Commissioners for Ohio; L. N. Bonham, Secretary of the State Board of Agriculture, and others.

One of the number, the chairman, was disposed to have a little fun; but he found he had his match in Dr. Mason. Said he, "Mr. Mason, about how much space will the Ohio bee-keepers want?" The Doctor replied that he always liked to ask for enough. Turning to E. R. R., with a twinkle in his eye, he said, "I think we need about 10,000 square feet." The Commissioners, and especially the Chairman, were nonplused; and the Vice-President of the Baltimore & Ohio railroad took out his pencil and began to figure. In the meantime, the Doctor behaved himself very circumspectly. Pretty soon they saw the joke, and began to laugh; and by dint of questioning, they learned that about 2,500 square feet would answer.

It is some cause for congratulation to the bee-keepers of Ohio, that they have made their application early—perhaps as early as any other association; and through Dr. Mason, they stand well with the Commissioners, and will doubtless receive a fair share of the appropriation and space under their control.

Our delegation made a very favorable impression upon the Commissioners, several of whom showed much interest in the matter, and voluntarily promised to do all they could for us. Dr. Mason has some personal friends among the Commissioners, and we feel much elated at the prospect before us.—*Gleanings.*

Bee-Keeping in Colorado.

REV. E. MILLESON.

About six years ago the State Bee-Keepers' Association was organized, with some six members, for a beginning of what is now a very creditable organization.

At the time of our organization it was not known that it was possible to produce any considerable amount of honey in Colorado. The introduction of alfalfa as a forage plant, very soon developed the fact that it was also one of the very best honey-producing plants grown in the West.

The vast developments in all the departments of industry in our young State has opened the eyes and quickened the steps of the vast number of toilers. The enterprising bee-keeper has not been left behind. Until recently we had no market for Colorado honey; California honey had the preference; but now it is all changed; there is no better honey produced on the American continent than is found in our sales rooms in Colorado.

I anticipated a good report from the bee-keepers from the north, middle and extreme south; there are very many questions to be asked and answered in our annual gatherings; it affords us an opportunity to exchange our experiences; our successes and failures will, no doubt, do us all good.

I am well pleased with the growth of our association in the past, and look forward to still greater achievements in our particular industry in the future. The possibilities of the bee culturist in Colorado for the future are indeed great, with such unlimited honey-producing plants, both in the northern and extreme southern portion of the State.

Allow me to congratulate you, bee-keepers, on the continued prosperity of our calling; hoping that the future may continue as bright and remunerative as the past has been. I am glad that there is indeed light ahead in regard to the foul-brood. This peculiarly bright climate surely is very much in our favor.—*Read at the State Convention.*

Denver, Colo.

Convention Notices.

☞ The ninth annual meeting of the Susquehanna County, Bee-Keepers' Association will be held on Thursday, Sept. 3, at South Montrose, Pa.
H. M. SEELEY, Sec., Harford, Pa.

☞ The Southwestern Wisconsin Bee-Keepers' Association will hold its next meeting on Wednesday and Thursday, Oct. 14 and 15, 1891, at Fennimore, Grant Co., Wis.
BENJ. E. RICE, Sec., Boscobel, Wis.

Bees will not work on fruit juice when there is honey in the fields, and they cannot hurt sound fruit at any time. If any of you doubt this statement, put a bunch of sound grapes or a sound peach in a hive of bees, and note the result 24 hours afterwards. It is birds and hornets that damage sound fruit—bees only gather lost juices.—*Exchange.*

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Sept. 3.—Susquehanna County, at So. Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

Oct. 14, 15.—S. W. Wisconsin, at Fennimore, Wis.
Benj. E. Rice, Sec., Boscobel, Wis.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—P. H. Elwood....Starkville, N. Y.
SECRETARY—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

Bee and Honey Gossip.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Preventing Swarming.

Mr. Thomson's remarks on page 120 of the BEE JOURNAL, for 1890, upon the construction of hives, are both timely and practical. He says that "swarming must be prevented;" but his advice regarding the manner of preventing swarming is too much like a blank. We wish that Mr. Thomson, and other bee-keepers, would give us, through the BEE JOURNAL, advice on this most important question. O. & E. CLARK.

Greenleaf, Wis.

Poor Honey-Flow.

On page 107, H. Hine, of Sedan, Ind., asks the following question: "What is the reason that bees will not store honey in the surplus boxes (which were put on new) when swarms will fill the brood-frames in less than three weeks?" I should say, because there was none to gather. I had intended to make a report on my new hive this season, but the season has been so unfavorable that I have not done so. Last year I made 8 hives, and transferred weak colonies into a part of them, but the season was so unfavorable that all the bees died during the Winter, except 2 colonies, and they were very weak. However, having good hives, and nice combs, as fast as swarms issued I put them into the new hives, and put on the sections, and in no instance did they fail to go to work within three days, and in some instances on the same day they were hived. I now have 10 colonies in those hives, but the honey-flow has been so poor that they only get about enough for their own use. The hive has entirely fulfilled my expectations. I use it for comb-honey. For extracted-honey, I use the Langstroth hive. There is no secrect about my hive, nor is it patented, and should any bee-keeper desire to know anything about it, I will describe it in the BEE JOURNAL.

O. P. MILLER.

Glendon, Iowa, July 25, 1891.

Decisions by the Higher Courts.

What the bee-keeping interest needs most to secure it on a rational basis, is a few comprehensive decisions in its favor by courts of last resort; and these will be its greatest security in the future. Then, when the advice of an attorney is sought in any case of grievance against bees and bee-keepers, the lawyer will have these decisions to guide him in giving advice, and many annoying suits will be averted. If the Bee-Keepers' Union accomplishes no more than this, it will have performed a great work. The Union cannot care for mere grievances. It defends *bee-keeping as a business*, and nothing else. G. W. DEMAREE.

Christiansburg, Ky.

Black, Shiny Bees, etc.

In reply to the question of D. C. Leach (page 118), AMERICAN BEE JOURNAL, we would like to state that the black, shiny bees he mentions are simply bees that have lost their downy hair. These bees are not sick nor suffering. Why they are to be found more numerous in one hive than in another, probably, is due to the same cause that makes men in one family bald headed, when those of another preserve their hair late in life. It is certain that bees which are in the habit of pilfering and robbing become bald much sooner than those of other hives, owing, probably, to their being caught by other bees and escaping from them again after more or less ill-treatment. There are many bee-keepers who are of opinion that the so-called nameless bee-disease is simply constipation, caused by unhealthy honey as food.

This disease is most prevalent at the close of Winter, and usually ceases entirely when new honey comes in; but in some cases is found to continue as long as there is any old honey in the hive. We have read in some old book the advice given of curing the bees of diseases contracted during the Winter, by feeding them with syrup to which a slight quantity of grape wine has been added. Although we have never tried this remedy, we are of opinion that a dose of good sugar syrup, with or without wine, would usually cure a colony effected with this disease, although it seems next to impossible to cure those bees which are so effected as to be unable to drag themselves. There is nothing of an epidemic nature in these diseases, and we do not think they will become dangerous to the apiarist.

Hamilton, Ills. DADANT & SON.

First Poor Season in Ten Years.

Last Fall I put 89 colonies of bees into the cellar, but 20 colonies perished during the Winter. May was cold and windy and some of the remaining colonies Spring dwindled, until only 30 of them were left. I now have 64 colonies but the bees get no nectar from clover nor basswood, and some of the swarms had to be fed; but now they are gathering a little more honey than they need for immediate consumption. This is the first season during ten years' residence in this part of the State, that I did not get a paying crop of honey.

EDWIN BUMP.
Marshfield, Wis., July 25, 1891.

Milkweed and the Bees.

I bought two colonies of bees in 1890, and they did well, considering the poor season we had. They filled their brood-chamber full of stores for Winter, and in the Spring were strong, healthy and clean. On June 7 one of the colonies cast a swarm, which I hived, but the next day they left to seek a home for themselves. The other colony has cast no swarm yet, and the bees in both hives start to work strangely. They always hung out, and did not work as they ought to. I examined them, and found lots of rotten brood, from which I send you a sample, and would like to know the cause. Some persons say the brood got chilled, others say the place where the hives stand is too hot. They stand in a corner where either north or west wind can strike them, but it is a clean, dry place in the garden. They work a good deal on milkweed, and I often see bees drag others out of the hive on account of some substance sticking to their legs. Will you please give me a little information on the subject? I like bees and am not afraid of them; but everything seems to go wrong. All other bees in this neighborhood are doing well.

LaCrosse, Wis. C. F. LANG.

[It is not foul-brood, but simply a case of chilled brood. Milkweed yields honey plentifully, but it also has queer masses of pollen, which attach themselves to the bees' feet, and cripples or kills them. This has, no doubt, caused the trouble mentioned above. These pollen masses attach themselves to the bees' feet by a glutinous substance which hardens quickly, and is difficult to remove after hardening.—ED.]

Good Yield from Basswood.

For the past 18 days we have been having a large yield of honey from basswood, the trees being literally covered with blossoms, and it was one continual roar day and night. The weather has been cool and very dry, and although the season has been cold and backward, the bees have built up remarkably well, and were in splendid condition for this basswood flow. I have not found it necessary to use any outside case or shell for Spring protection of bees, if they were strong and well supplied with stores when taken out of the cellar. I find that about 90 per cent. of my colonies have their hives full of sealed honey and brood, and have made from 20 to 48 pounds of surplus. I shall take off all surplus, extract one frame from each hive, and prepare for our Fall yield. If the season is warm, I shall run for comb-honey; if cold, for extracted-honey.

N. P. ASPINWALL.
Harrison, Minn., July 26, 1891.

Adulteration of Beeswax.

We read a good deal about the adulteration of honey, which is bad enough, if true, but I have every reason to believe that the adulteration of the product from the honey-bee does not stop with honey. Bee-keepers, or ex-bee-keepers, must be mixing their beeswax with lard and tallow. I have repeatedly seen cakes of wax which had been brought to store-keepers, containing tallow and lard—mostly the former—and ruined for making comb-foundation. Not only this, but the store-keeper has not the experience to detect this adulteration, and after one or two losses in this way, he says: "No, we do not take beeswax any more; had no luck with it;" and the bee-keeper must find a market elsewhere. Besides, the store-keeper smiles a ghastly smile in his sleeve, when he hears that bee-keepers are exceptionally honest; and he may, in fact, determine to deal, in the future, only with bee-keepers, thinking that if there are any worse people, he wants to have nothing to do with them.

R. F. HOLTERMANN.

Brantford, Ont.

Good Season for Honey.

I have a fondness for bees, and think I will try the business, hoping to be successful, and shall begin with only a few colonies. The old box-hive is generally used here, and the owners never examine the bees, to see how they are doing, until they think it time to take the honey, when they very often find a number of colonies dead from starvation, and then they say that bees will not pay here. This is a fine country for peaches, plums, and blackberries, and very good for apples. There is an abundance of hoarhound and horsemint, but I do not think that white clover has been tried sufficiently to determine how it would grow, although I am inclined to think it would do well. I think there are not more than 50 colonies of bees within a radius of 4 miles from my place. Last year and this year their owners have taken considerable honey, and claim that they have been good honey seasons, but I do not know of any one of them having planted a single thing for his bees.

T. G. SHELTON.

Mount Sylvan, Tex.

Better than Usual.

Last Spring my apiary had become reduced to 7 colonies, but I now have 13 colonies. For several seasons I have been obliged to feed my bees, but this season they have done better, and I shall have some surplus honey, after providing them with Winter stores. My bees are Italians, and I have thought that a change might be desirable, although some of my colonies have been crossed with neighboring bees.

JNO. HUNT.

Plain City, Ohio.

Dark Honey.

Can you inform us as to the cause of section honey being of so dark a color this year? It is so in Will County, almost invariably. Bee-men here cannot explain it.

JOHN W. MERRILL.

Willmington, Ill., July 31, 1891.

[The color of honey is determined by the flora from whence it comes. White clover being comparatively scarce and the so-called honey-dew plenty, it is more than probable that the honey you mention is a mixture of the two.—ED.]

Just the Thing.

The Honey Almanac is just the thing to increase sales of honey. Many persons are surprised at the number of ways in which honey can be used. I would suggest that all bee-keepers having good recipes should send them to you for next year's Almanac. If the bee-keepers in "Dixie" cannot lead, we will follow close behind.

W. H. BLACK.

Montgomery, Ala.

Porter Bee-Escape.

Seeing an advertisement of Porter's Spring Bee-Escape, I ordered one, and am very well pleased with it. I would not now do without it, if it should cost $5 to replace it.

N. W. SHULTZ.

Shreve, Ohio.

Croup Remedy.

This is the best known to the medical profession, and is an infallible remedy in all cases of mucus and spasmodic croup:

Raw Linseed Oil	2 oz.
Tincture of Blood Root	2 drs.
" " Lobelia	2 drs.
" " Aconite	½ dr.
Honey	4 oz.

Mix. Dose, ½ to 1 teaspoonful every 15 to 20 minutes, according to the urgency of the case. It is also excellent in all throat and lung troubles originating from a cold. This is an excellent remedy in lung trouble: Make a strong decoction of hoarhound herb and sweeten with honey. Take a tablespoonful 4 or 5 times a day.

O. S. COMPTON.

Follow the bee's example, and in your care of honey and comb, let nothing go to waste.

Wavelets of News.

Workers Chasing Drones.

A lady called the other day to inquire why her bees were chasing drones. If there was plenty of honey to be had in the fields, the gentleman of leisure would be allowed to take their daily outings, be gladly welcomed on their return, and met at the entrance and given prepared food by their obedient servants, the workers.

In the economy of the bee-hive, the management is for the good of the whole community; if the queen is not able to perform her duties, she is removed, and another one reared in her place.

When the income of the community lessens, their expenses are cut down to meet it. The providers govern the outlay; the queen does not govern the colony, but the workers do; when they wish to rear much brood, they feed the queen prepared food, abundantly; and when they think their income does not justify it, they feed her less.

When honey is plenty in the fields, drones are reared, and preparations are made for swarming, but as soon as it fails, drones are driven out and daily expenses are lessened.—MRS. L. HARRISON, in the *Prairie Farmer*.

Bee-Escapes.

I have received a new bee-escape from Mr. Porter, of Lewiston, Ills., in exchange for one sent him last year. It is a great improvement over his first one, is well made, and quite an ingenious little device. It is a horizontal escape on my general plan, even to the two thicknesses of tin with bee-space between.

The only new feature is that the bees must pass, one at a time, between two springs that immediately close to about half a bee-space, after the bee has passed through.

I tried a similar spring arrangement last year, but soon gave it up as impracticable. It looks all right, and will, no doubt, work when bees are not very numerous. When hives are "boiling over," and bees fill every corner and crevice about the hive, is when the trouble begins.

I will predict that when this escape is used during a good honey-flow, when bees are strong, that the bees will crowd against the springs from the hive-side, in their efforts to get back into the cases, closing the exits completely, and that it will then not work at all.

These springs are entirely unnecessary, as I have proved to my entire satisfaction. The difficulty of preventing the bees from returning I have long since overcome. The only remaining problem is to induce them to leave supers more speedily. I have some modified forms that I think will accomplish this. Really, I would like to know what Mr. Porter's claims for a patent are, and is it not a little late to try to try to patent an invention that is the common property of the bee-keepers of America?—C. H. DIBBERN, in *Plowman*.

The Flight of Bees.

It seems to be almost a general idea that honey-bees will fly nearly a mile a minute. Those who have watched loaded bees coming to the apiary near sunset have a different opinion, however. A heavily loaded bee when the sun is low may be seen a distance of twenty rods. It will require from nine to twelve seconds for it to go that distance. I have also timed them a distance of from forty rods to half a mile with an apiary in full view by setting a single bee at work on a comb containing syrup. The quickest time made would be about five minutes, the longest from twelve to fifteen minutes.

Allowing it two minutes to disgorge its nectar and it will easily be seen that a honey-bee is not the swiftest thing in creation. Probably the flying time of bees on their outward trip is at the rate of from fifteen to twenty miles per hour. A loaded one will require about twice the length of time to make the same distance. If bees flew at the rapid rate that some insist, they would make but few trips through woods before dashing themselves to atoms against obstructions.—J. H. ANDRE, in *National Stockman*.

Ventura county, Calif., is said to contain over 18,000 colonies of bees. The annual value of the honey crop is over $60,000.

Conundrum.—Why is a bee-hive like a bad potato? Answer.—A bee-hive is a bee-holder, a beholder is a spectator, and a spect-tater is a bad potato.

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Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

◆

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

◆

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

◆

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00. For sale at this office.

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this Journal, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

Please send us the names of your neighbors who keep bees, and we will send them sample copies of the Bee Journal. Then please call upon them and get them to subscribe with you.

Binders made especially for the Bee Journal for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the Bee Journal (with $1.00 to pay for the same), or 2 subscribers to the Home Journal may be sent instead of one for the Bee Journal.

YOU NEED an Apiary Register, and should keep it posted up, so as to be able to know all about any colony of bees in your yard at a moment's notice. It devotes two pages to every colony. You can get one large enough for 50 colonies for a dollar, bound in full leather and postage paid. Send for one before you forget it, and put it to a good use. Let it contain all that you will want to know about your bees—including a cash account. We will send you one large enough for 100 colonies for $1.25; or for 200 colonies for $1.50. *Order one now.*

☞ The Union or Family Scale has been received, and I am much pleased with it. W. H. Kimball.
Davenport, Iowa.

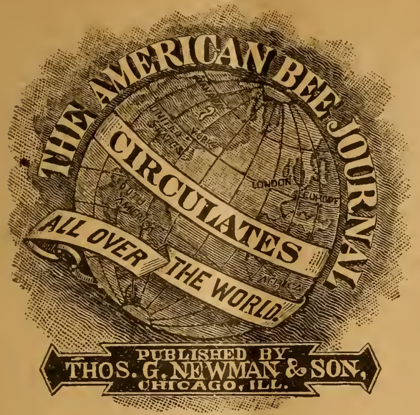
We send both the Home Journal and Bee Journal for one year, for $1.35.

THE HONEY-BEE: Its Natural History, Anatomy, and Physiology. By T. W. Cowan, editor of the *British Bee Journal*, illustrated with 72 figures and 136 illustrations. $1.00. For sale at this office.

The Bee-Keepers' Directory, by Henry Alley, Wenham, Mass. It contains his method for rearing queens in full colonies, while a fertile queen has possession of the combs. Price by mail, 50 cents.

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms.

Very Punctual.—I was surprised to receive the feeder as soon as I did. I like it very well. I receive mail matter in a shorter time from you than from Carlisle, O., only eight miles from here.
John H. Rohrer.
Tippecanoe City, O., July 16, 1891.



Our Club Rates are: $1.90 for two copies (to the same or different post-offices); and for THREE or more copies, 90 cents each.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVIII. Aug. 13, 1891. No. 7.

Editorial Buzzings.

Be to Every Man just—and to woman
Be gentle and tender and true ;
For thine own do thy best, but for no man
Do less than a brother should do.

So living thy days to full number,
In peace thou shalt pass to thy grave ;
Thou shalt lie down and rest thee and slumber,
Beloved, loving hearted and brave.
—Samuel Waddington.

◆

Reports recently received from California are to the effect that the honey crop in that State is short, and that the most of the honey has already been sold.

◆

The Parks Basket, which is so nice, convenient and light, for shipping supplies for bee-keepers, and, in fact, for any line of light goods, is rapidly coming into use. We hear that Mr. Parks has sold his interest in New York for his invention, for $15,000 in cash.

The Honey Crop is as yet an unknown quantity. Look at the expressions published lately in this journal:

No honey at all.
The best crop for four years.
Poorest honey crop ever known.
Two-thirds of a crop.
Honey crop a total failure.
Basswood the only hope.
Heavy crop of honey.
A good honey-crop.
White clover a failure.
Good yield of honey.
No good white clover honey.
Honey crop ruined by honey-dew.
No honey-dew this Summer.
No honey in the sections.
An average crop.
Fair crop of honey.
Very little nectar.
Good season for honey.
Poor honey-flow.
Good yield from basswood.

We could enumerate many more, but these are enough to show that the country is too much extended, and the climatic conditions too varied to be able yet to arrive at definite conclusions as to the quantity of honey contained in this year's crop. We hope that there is a large Fall crop yet to come.

Dr. C. C. Miller says that he thinks that he will have "a better crop than for years." We hope so, but it is quite evident that the Doctor's favorite expression is still appropriate: "I don't know."

◆

How and Where?—A subscriber asks the following very pointed questions:

What per cent. of those devoting their entire attention to the bee and honey business, excluding supply dealers, clear $1,000 or over per year above their running expenses?

Where is the best locality for a young bee-man to locate? His desire being to locate permanently, and give his whole attention to bee-keeping?

These questions are more easily asked than answered. Who will try to reply?

◆

R. B. Leahy, of Higginsville, Mo., gave us a call last week. He is a supply dealer, and is making preparations for next season's business already.

Illinois Honey Exhibits at the World's Fair, and the necessary united efforts to make a credible show, is the theme now engaging the attention of Illinois apiarists. The following from friend A. N. Draper is to the point:

> On page 102 an invitation is given, to every one interested to write at once and give their opinion. I waited to see what some of the prominent bee-keepers would say or do; but it seems as though there is very little interest taken in the movement. I cannot understand why it is so, as it seems to me as though the importance of this movement can hardly be overestimated.
>
> Every bee-keeper in the State ought to become a member of the Illinois Bee-Keepers' Association. This would give us a membership of about 10,000 and. with this number of members, we would be able to accomplish something. To-day, this association has only 16 members, yet with this small number we have secured an appropriation of $500 to publish our proceedings.
>
> Now, it seems to me that with this liberal encouragement the bee-keepers all over the State ought to respond. If we do not receive our just portion of the appropriation for the World's Fair, it will be the fault of the bee-keepers themselves, for we have the numbers and the influence. The only thing we lack is organization. To get every one interested to join the movement is for the benefit of all bee-keepers, and especially of every one who lives in the State of Illinois. The World's Fair is going to be the biggest thing of the kind that Illinois has ever had. Are the bee-keepers going to sit still and let the brothers from some other State come right to their own home and outdo them?
>
> Send your name and address with $1 to Mr. James A. Stone, Bradfordton, Ills., and have your name enrolled as a member, and the sooner the better, for in union there is strength. The list of members should reach into the hundreds by the time we meet in September, even though the members are not all there. But for my part, I should be pleased to see every bee-keeper in the State there, and all of his friends who may be interested in bee-culture. Come if you possibly can, and if you cannot come, why, at least have your name placed upon the roll of members, and help the movement all that you can, and in no way can you help the cause of bee-culture, more than in this.
>
> If the bee-keepers all over the State will join in this movement, we will have from $2,500 to $3,000, and perhaps from $6,000 to $10,000 to place the exhibit where it ought to be. But this result cannot be reached unless we can make the Illinois Bee-Keepers' Association what it ought to be. It should number, at least, from 500 to 1,000. There will be a good many other benefits that will accrue from an organization like this, and which can be secured in no other way. Let us show to our Legislature that their action is appreciated by us; that we are worthy of their appreciation and assistance.
>
> I heartily endorse what Mr. Stone has to say on page 102 of the BEE JOURNAL, about the meeting in September. We can get all we want, or need, if we will only unite and work; but we have no time to lose. If we hold back, and wait for some one else to do the work, we will not accomplish much. We want the influence and respect that our numbers should command. A. N. DRAPER.
>
> Upper Alton. Ills., Aug. 5, 1891.

The editor of the BEE JOURNAL last week had an interview with the Committee of Agriculture of the Board of Managers of the Illinois State Exhibit, relative to the proportion which should be credited to apiarists for their exhibit at the World's Fair. The necessities of the case were argued, pro and con. and the chairman, with the concurrence of the Committee, said: "You may say to your people that they will receive their full share of the appropriation, and all the space and attention necessary to make the exhibit of Bees and Honey a grand success."

Mr. Draper is quite right. With a united front, we can obtain all the recognition we want. In all departments of life, energy and united efforts accomplish great undertakings.

Mr. John P. Reynolds has been elected Director-in-Chief, at a salary of $7,000 a year, out of which he has to pay the expenses of his office. In a letter to Hon. J. M. Hambaugh. in reply to one sent him on the subject, he says:

> I recognize the interest you refer to (bee-keeping, supplies and products) as an important one, and as a department of general agriculture which has always,

and very properly, received encouragement at the hands of the State Board of Agriculture.

The bill (374 Senate), as I understand it, provides for a "full and complete collection of all the cultivated products in the several branches of AGRICULTURE —farmculture, horticulture, and floriculture"—also appropriates "a sum not to exceed 5 per cent. of the appropriation......to encourage and promote live stock exhibits of all kinds in the State of Illinois."

These two provisions seem to fully authorize the recognition of bee-keeping and products in making up the State Exhibit at the World's Fair, and I am sure you can rely upon the good sense and good faith of every member of the State Board of Agriculture, and their pride as citizens, to do all which the means at their command, and the regulations of the National Commission, will permit them to do in bringing bee-keeping and every other important agricultural interest to the very front in their respective lines. For myself I pledge my vote and influence to that end.

JOHN P. REYNOLDS, V.-P.

The letter from Mr. Hambaugh, referred to above, was sent to several members of the Board of Agriculture, who now have charge of the whole matter, and reads thus:

DEAR SIR:—I discover that no provision has been made in the Senate Bill, now before the House, relative to the World's Columbian Exhibition, for a proper and suitable exhibit of Honey, Wax and Apiarian Supplies.

My bill, calling for an appropriation of $5,000.00, will be made an amendment to the Senate Bill, unless I have prompt assurance from the members of the State Board of Agriculture of a proper recognition of this industry, and for this purpose I desire an immediate answer from you, with assurance that you will give this interest due consideration, and allow the bee-keepers of this State a pro rata amount, say one-half of one per cent. of the gross appropriation.

Quite a number of the members of the Board of Agriculture have given assurance that bee-culture should receive liberal recognition. In order to assure the 10,000 bee-keepers of Illinois of this, we give the following extracts from their letters, sent to Mr. Hambaugh, in reply to the foregoing:

Hon. Lafayette Funk, President of the Board, writes:

The State Board of Agriculture, if put in control of the above subject matter, will carry into effect just what you gentlemen of the Legislature prescribe in the law upon the subject.

Hon. E. E. Chester, Vice-President for the Fifteenth District, writes:

I can assure you (aside from the fact that I am personally interested in bee-culture) that I shall heartily approve of the appropriation of at least as much as one-half of one per cent. of the amount appropriated for the State exhibit, to be used in the interests of bees and honey.

Hon. James W. Judy, Vice-President for the Thirteenth District, wrote:

As a member of the State Board of Agriculture, and as a citizen of the State of Illinois, I am fully in sympathy with the sentiment contained in your communication. I want the bee-keepers' interest, and every other industry of Illinois, fairly represented at the World's Columbian Fair, and will use my best efforts for the accomplishment of the same.

Hon. James W. Washburn, Vice-President for the Twentieth District, wrote:

I shall most willingly favor an appropriation by the Board of one-half of one per cent. of whatever appropriation may be made, for the purposes you indicate. I am strongly in favor of encouraging the bee-industry.

Hon. B. F. Wyman, wrote as follows:

I should certainly favor a suitable appropriation to enable the bee-keepers to make a creditable display of honey, wax and bee supplies, at the Columbian Fair.

Hon. E. C. Pace expressed himself in this forcible language:

From numerous communications that I have received, there seems to be an impression on the minds of many, that the object of the State Board of Agriculture in this Columbian Exposition business was to *avoid* exhibiting the resources of the State, instead of *making*, as they desire to do, *the best possible exhibit.*

One interest in our State is exactly as near to them as another. They have no pet hobbies, and I can assure you with the utmost confidence, that every interest in the State will receive the consideration, to which it is entitled. Any one who has given the subject of bee-culture any attention, will recognize at once its importance, and in a country like this in which I live, where it forms one of our principal products, it is unnecessary for me to assure you that the interest will be carefully nurtured, and full justice done it, as well as every other interest in the State. The intention of the Board, so far as I have heard an expression, is to show off the resources of the State to the very best possible advantage, and by this means to proclaim to the world what we so well know, that Illinois is the greatest State in the Union.

Hon. A. B. Hostetter, Vice-President for the Sixth District, wrote thus:

I certainly favor a liberal recognition of the "bee industry," and I hope the appropriation will be made large enough so that not only this industry, but any other not specially mentioned in the bill, and worthy of recognition, can have liberal encouragement and be exhibited at the World's Fair to the best possible advantage, and to the credit of our whole State.

Hon. B. Pullen, Vice-President, wrote thus:

I recognize the importance of the industry referred to, and would be disposed to give it a fair and liberal recognition.

Hon. Samuel Dysart, Vice-President for the Seventh District, wrote:

I have been in the bee-keeping business for 25 years......and I will certainly use all my influence to have that industry recognized in proportion to other rural pursuits.

Hon. J. Irving Pearce, Vice-President for the First District, wrote thus:

I assure you that the bee-keeping industry of Illinois shall have everything done for it that the law will allow us to do. You will find me the friend and champion of that industry.

With these assurances we ought to be well satisfied that when the apportionment is made (probably next December), the bee-keeping industry of Illinois will receive its due share of the funds appropriated by the State. It will be well for bee-keepers in every district to write to their Vice-Presidents next October, to keep it before their minds, and let them know that we are confiding in their sense of honor and justice, confirmed by the promises of many of their members, and expect our due share of the public funds, so as to be able to make an exhibit which shall be a credit to the State, as well as the entire Northwest.

◆

Gleanings has donned a new engraved title page. Its general appearance is far ahead of the old one.

◆

Quite a Number of our late callers were on their way home from the Grand Army Encampment, at Detroit. Among them came Mr. James Forncrook, of Watertown, Wis., of one-piece section notoriety.

◆

The New Medals will be illustrated in next week's Bee Journal. They are for competition at Bee and Honey Shows, one for comb-honey and one for extracted-honey. Two medals are furnished *free* to each affiliated society by the North American Bee-Keepers' Association; the award being made by the officers of the local societies.

◆

Rev. E. T. Abbott, of St. Joseph, Mo., made a friendly call last week. In the latest Railroad Classification, comb-foundation is listed as "artificial comb." Mr. Abbott had an interview with Mr. Ripley, the manager of the Traffic Association, and, as a result, it will be named "Bee Comb-foundation," in the next edition. Mr. Abbott also labored with the Manager to get a reduced rate on bee-hives and sections in car-loads. This will be considered by the Committee at the next meeting.

◆

The Darke County Union Bee-Keepers' Society will hold a basket meeting, on the Fair Grounds, at Greenville, Ohio, on Saturday, August 22. Everybody invited.—J. A. Roe, Secretary, Union City, Ind.

Apiculture in Canada.—From the annual report for 1890, just published, we glean the following statistical information:

The Ontario Bee-Keepers' Association reports an increase of nearly 100 per cent. in its membership, which last year numbered 353. Its policy is to encourage the formation of local societies, and last year there were eleven of these affiliated with the parent body. They are the Middlesex, Norfolk, Brant, Bruce, Oxford, Perth, Haldimand, Lambton, Kent, Western Ontario, and Listowel Bee-Keepers' Associations.

It is remarkable that the organizations are all in the western portion of the Province. This is not because the eastern part of Ontario is unfavorable for honey production or destitute of bee-keepers. It has just happened to be so; precisely as the dairy interest, while capable of flourishing in most parts of the country, has happened to center itself in the counties of Oxford and Hastings. There are few localities in Canada where honey does not abound, and if there were only bees and bee-keepers enough to gather it, a vast addition might be made to the national wealth from this source.—*Rural Canadian.*

The Punic Bees are very lively yet, though the sample lot sent us by friend E. L. Pratt, have been caged and on our desk for some 10 days. Since writing this we have taken another look at them. None of them are dead, and none of them seem to be weary. But all are not captivated with the Punic bees. Dr. J. W. Vance, thus mentions them, and others, in the *Wisconsin Farmer* of last week:

I think I shall never become reconciled to black bees, even if they are of the Punic stock. The Punics are said to be the greatest known, yet if they are as gentle as the Carthagenians I fear I should not be able to live in peace with them. I once had a sample of Carniolans, a variety said to be extraordinarily gentle, and my experience with them was such that I was very glad to supersede the two queens and introduce Italians. The Carniolans seemed to possess the natural propensity of blacks to sting, and not only did they exercise their genius in that way when any one came near their hives, but they visited the neighbors on adjoining lots and chased them to some safe retreat. I shall always have a suspicion of any bee possessing any sort of black blood. I will wait awhile before investing $40 in a "Punic" queen.

Some One has written us a letter descriptive of a non-swarming hive. It gives no name or address, nor anything to indicate where it came from. Several questions are asked, but it is impossible to reply for lack of identity.

A Section-Folder and Foundation Fastener, combined, is received from Mr. W. O. Leach. It is ingenious and practical. He intends to exhibit it at the Toronto (Ont.) exhibition next month. We hope to be able to present an engraving of it next week.

Another Bee-Escape comes from Mr. C. H. Dibbern. He says, "it has been fully tested in actual use, under various conditions, and found almost perfect." It is 3⅜x6½ inches, and is made of tin and wire cloth, with a Chinese puzzle or "labyrinth," inside. An engraving is being made which will give a better idea than can be conveyed by words. Our readers may expect that in our next issue.

Mrs. S. E. Sherman, of Salado, Texas, is editing a Bee Department in the *Southern Horticulturist.* In reference to the State Convention, she writes thus:

Why not have the State Association hold its annual meetings either at Dallas sometime during the fair, when the whole State could be reprented, or, what might be better still, in conjunction with the State Horticultural Society. As these two pursuits are, or should be, inseperable, why not have a joint meeting of the two at the same time and place? I have worked with this end in view for quite a while, and hope in the near future to see it consummated. I would be pleased to hear from the officers of the State Association in regard to this change, and ascertain if it meets their approbation and approval.

Queries and Replies.

Evidence of a Queen Being in the Hive.

QUERY 779.—1. Is the carrying of pollen into the hive, after the bees are out of the cellar, a reliable evidence that there is a queen in the hive? 2. If not, is there any positive evidence, aside from examination, that there is a queen in the hive? If so, what is it?—Ohio.

1. No. 2. No.—**J. M. HAMBAUGH.**

1. No, sir. 2. No, sir—**J. P. H. BROWN.**

1. No. 2. Yes, finding no brood.—**A. J. COOK.**

1. I do not think so. 2. I think not.—**C. C. MILLER.**

1. I think it it a good sign, but not infallible.—**EUGENE SECOR.**

1. No, it is not. 2. I do not know of any way to determine the matter, other than by an examination.—**J. E. POND.**

I know of no positive evidence beside inspection, but carrying in pollen at all freely is good enough evidence.—**R. L. TAYLOR.**

1. It is usually good evidence, especially if noticed at once. 2. Nothing short of an examination is *positive* proof. —**DADANT & SON.**

1. If one of my colonies is carrying in plump, full loads of pollen, that is evidence enough that there is a fertile queen in the hive.—**JAMES HEDDON.**

1. No. 2. If Ohio is a live bee-keeper, as he should be, it will be nothing but fun for him to look into the hive, and see that it has a queen.—**G. M. DOOLITTLE.**

1. It is a good indication when you see pollen at that time. 2. Look for immature brood at the entrance early in the morning, as you will often see it.—**H. D. CUTTING.**

1. Queenless bees will carry pollen, but not as freely as those that have a queen. 2. The only positive evidence of queenlessness is the absence of eggs and of brood, and even that is not always infallible.—**M. MAHIN.**

1. Yes, if they are carrying in considerable quantities of pollen. 2. If the bees work as if they meant to "get there," besides bringing in pollen, you are safe in marking that hive as having a good queen.—**C. H. DIBBERN.**

1. No; but when a colony is actively at work carrying in pollen, they have a queen. 2. Queenless colonies in Spring carry in some pollen, but are listless and comparatively inactive. Many bees will also be seen about the entrance, to ward off robbers.—**G. L. TINKER.**

1. Not always. 2. They might have brood. I am seldom deceived by their actions, but I can hardly tell why. This Spring I noticed a hive that had always many bees around the entrance, while others had no time for loafing. The colony was quite large, and I inferred that they were queenless. A balled queen was rescued, which I gave to them, and their actions changed. Any observing person, can soon learn the difference between queenless colonies and others.—**MRS. L. HARRISON.**

1. Well, it is a mighty good sign that all is right when bees begin promptly to carry in pollen in the early Spring. When bees are queenless they soon begin to stand listlessly about the entrance, and show a dull inactivity, too plain to escape the eye of the experienced apiarist. 2. Bees that have brood left to rear queens from, may not show their queenlessness so plainly, but even in that case I am not likely to be deceived as to their condition.—**G. W. DEMAREE.**

1. Not invariably. 2. An examination only will give positive evidence of there being a queen in the hive.—**THE EDITOR.**

Sundry Questions.

Different Strains of Bees.

1. Which would be the most profitable for honey gathering, the golden Italian or Carniolan? 2. Which works on red clover the best? 3. Is there any way of keeping a pure breed of Italians from surrounding hybrid colonies. If so, how is it managed? **E. G. GOLIJENBOOM.**
German Valley, Ill.

[1. The golden Carniolans have done better all around, this season, than any other race or strain. Have not had time to test the Punics on honey yet, but they bid fair to beat the world. In all points thus far they are ahead of any kind of bee we ever had.

2. One race will work on red clover as well as another. It is only the second

growth that bees touch anyway, here, and that is not enough to count on.. The red clover "gag" is about played out.

3. The only way I know of keeping bees pure is to put drone-traps on all hives within one mile of your bees, and to the hives of all impure colonies in your own apiary, allowing only your best drones to fly at swarming time. If you allow no increase it is a simple matter to keep the bees all pure, and of the best quality, by purchasing warranted queens from some reliable queen breeder, and introduce one to each of your colonies. A good queen will live two years, and often three, so you will not be obliged to replace them all at one time, but purchase a few each season to take the places of the oldest ones. The best time to requeen your colonies is after the honey-flow.—E. L. PRATT.]

Honey and Pollen on the Same Trip.

Bees are doing but little here now. Do bees bring in pollen and honey on the same trip? Please answer this question in the BEE JOURNAL. S. B. DILLER.
Albion, Iowa, Aug. 3, 1891.

[It is a fact that nearly all the flowers which give nectar yield pollen also, and when the bees gather a load of the one, quite often they have some of the other. The honey being carried in the honey sac, and the pollen in the pollen pockets on the thighs, neither one interferes with the other.—ED.]

Carniolan Bees.

With this letter I send a cage of Carniolan bees. The mother of them was hatched and fertilized in Germany, and imported by me. Please compare them with other bees sent to the BEE JOURNAL, and state the difference in color. I say that Carnolian bees are not golden or yellow. I know what I am talking about, for I have imported them at different times. If the Carniolian bees are a golden or yellow color, I have been humbugged. I will say, further, that I have not sold a queen, or offered one for sale; I got them for my own benefit, and so far I like them. I have been handling my bees from imported queens all Summer, but never had one attempt to sting me. I use no smoke.

L. HIGHBARGER.
Leaf River, Ill , Aug. 3, 1891.

[The bees sent by Mr. Highbarger are distinctly marked with yellow bands, but they are not "golden yellow" by any means. They are quiet and contented, and show no excitable motions. When first imported they were called Krainer bees, and several descriptions of them may be found in back volumes of the AMERICAN BEE JOURNAL.—ED.]

Prediction About the Honey Crop.

I am inclined to think that we have a prophet in Tennessee. Mr. Sam Wilson prophesied in January last that linden and sourwood would be almost a failure here. With little confidence in the prediction I took a note of it, and find it true. He also prophesied, in March, that early bloom would be good. From fruit, poplar and persimmon we had an excellent flow of honey. He prophesied for a few other States also, and, from what I can learn, he was very nearly correct with regard to them. I live near the Allegheny mountains. Our bees have been stronger here than common this year. We have had heavy rainfalls here for some days past. My bees have not swarmed much this season, although 1 colony increased to 4.

R. A. SHULTZ.
Cosby, Tenn., August 4, 1891.

[Mr. Wilson's predictions have been on record in this office for months, and will be published as soon as we receive a reply to our letter, mailed to him some days ago. All would be interested to learn how the conclusion was arrived at.—ED.]

When Writing a letter be sure to sign it. Too often we get letters with the name of the post-office, but no County or State. One such came recently, and we looked into the Postal Guide and found there were places by that name in 13 States. That order for goods will have to wait until another letter comes to give the proper address. Be sure to stamp your letter, or it may go to the dead letter office.

RAIN.

The brooks leaped up to catch it,
And the breezes held their breath;
The lilies sprang up boldly
And shook their heads at death.
The roses blushed to crimson
At the kisses of the rain,
And the sun looked out and saw it
With a flush of jealous pain.
—May Riley Smith.

Topics of Interest.

Spraying Fruit Trees While in Bloom.

A. J. COOK.

I hope you will publish the following from the *American Garden:*

"A law against killing our insect foes! Two generations of cultivators have been striving to discover methods or enact laws to enable man to harvest his share of the crops. And now comes that wise and good man, Prof. A. J. Cook, of Michigan, advocating a law to prevent fruit-growers from spraying blossoming fruit trees with poisonous insecticides, because, forsooth, the bees are also insects, and will go into the trees in search of honey. Verily, it must be that Prof. Cook was trained in an ultra 'protectionist' school! The bees are all right, and honey is a good thing, but really, it seems as if the fair old rule of 'the greatest good to the greatest number' were a just guide in such matters. Surely fruit is of more importance than honey! If those busy workers must have legislation, let us advocate a training school for bees, in which they may be taught to keep out of the orchards at the dangerous period. The fence question comes in here, too. Will not the law compelling an owner of domestic animals to fence them in, apply to apiarians, as well as to other stock-farmers? Is it more lawful for bees to trespass, than for a cow or a pig?"

It shows that even the veriest nonsense will occasionally find a place in the best of papers. The editor of the *American Garden* would denounce the above, as we would, as sheerest absurdity. He knows that bees are as valuable to the horticulturist as to the apiarist, and that the law referred to is as much desired by every intelligent horticulturist as by the apiarist. When trees are in blossom is not the time to spray, setting bees aside, as the Michigan Horticultural Society has urged for years. The writer of this article should study the elements before he essays to instruct others in horticultural matters. I am sure such pseudo wisdom would pain the editor of the *Garden* as much as any one.

Agricultural College, Mich.

Bee-Keeping and Fruit Culture.

S. L. WATKINS.

A San Diego County apiarist writes me as follows:

I have read your articles in the *Pacific Rural Press* regularly, and I am always pleased with what you have to say. There is one thing that I have wanted to see you or some of our good writers do, and that is, write on the subject of law, or California law, in relation to bees or bee-keepers.

Some of my neighbors have an idea that they can make me move my bees any time they see fit, until those bees are five miles from any orchard or vineyard.

Now, if this is California law, we have not much right left us, and I do not feel like giving up a good business. L. Y.

Elsinore, Calif.

Friend Y., do not become frightened: there is no danger of those neighbors of yours forcing you to move your bees five miles, or five inches either, for that matter, unless you want to.

Ignorance is generally the cause of the whole thing, and I strongly suspect that your non-agreeing neighbors are not up with the times.

In Placerville, at one of my apiaries, I was threatened with lawsuits on several occasions by a couple of persons who knew nothing at all of the habits of bees. They stated that the bees were eating up all their grapes, and in proof of their statement, invited me to come to their vineyard. I went. I found thousands of yellow-jackets and wasps at work, and also quite a number of bees.

"Now I want to see the bees opening grapes," I said. We watched a long time and took careful notice of a great many bees, and at last they had to admit that they were mistaken in regard to bees opening grapes. It is the yellow-jackets and wasps that do the real injury. Bees do nothing but suck at the juice after the fruit is injured, and unthinking persons seeing them do this, jump to the conclusion that the bee is the original trespasser.

I once asked the most extensive fruit-grower of Upper Placerville about how much injury my bees did his fruit in a season, and he said that he thought 50 cents would cover damages for the juice they sucked up. His ranch was about 300 yards from my apiary, and he dried quite a number of tons of fruit every season ; besides he had quite a vineyard.

The only real damage I ever knew my bees to do was to suck up the juice of extra ripe Bartlett pears which a friend was trying to dry. In a case like this, I would always pay the damage done by the bees. Bees are a great aid to fruit-growers in helping to fertilize the blossoms, and the good they do far overbalances the damage ever done by them.

Fruit-growers and bee-keepers should be friends. When they become involved in a difficulty about bees, let each come half-way and talk the matter over in all its bearings, and in all cases try to arrive at a friendly conclusion.—*Pacific Rural Press.*

Grizzly Flats, Calif.

Careful Handling of Bees.

BUZZ.

If there is one point I would impress upon the mind of a novice in bee-culture more than another, it is to acquire the habit from the first, of very careful handling.

While attending a National Bee Convention at Cincinnati, I was surprised and delighted with the good behavior of Mr. Muth's bees. There were about 40 colonies on the roof of his store, and there were about as many visitors as could be accommodated in the passageway between the rows of hives. I do not remember that Mr. Muth used any smoke ; I rather think he did not. He opened the hives, lifting out combs, and pointing out the queen to the visitors, who stood closely around. No one present had any protection, and though it was late in Fall, when no honey was being gathered, there was no stinging.

AMIABLE BEES.

Bees came in and out of the store and customers did not appear to notice them more than flies. If a bee touched the hair of one of Mr. Muth's sons, he very gently brushed it aside. I said to one of them : "Do you ever kill any bees ?" He said: "O, no ! if we did, father would go for us."

After inspecting the apiary of Mr. Muth, a party of us took carriages, and were driven to Mt. Healthy, to visit the apiary of Mr. Hill. Here I noticed the same thing. While a party stood around an open hive, I kept at a respectful distance, and remarked to a daughter of our host, I never before saw any bees like your's here in Ohio.

She replied : "It is all in the handling ; my brother used to help father, and the bees were very cross ; but since I help him, they are not so any more. I work gently, and never jar them, or strike at them with quick motions, and they never get excited." Hives manipulated without snap or jar, are most desirable. Our first hives had the frames covered with a board that pried up with a snap, which caused the bees to immediately elevate their tails, and a tiny drop of poison was occasionally seen. When, in lieu of this board, duck or heavy muslin was used, it was a move in the right direction, for this could be peeled back without causing any disturbance at all.

MASHING BEES.

This is another justifiable cause for war, as it releases the poison, and the scent of it angers them. When the clothing of a person has this scent, bees will attack it when near their hive.

In most apiaries of any size, there will often be a score or so of bees which appear to follow war as a business—never apparently going to the field for nectar, but watching the doors for someone to attack. The best way to manage such fighters, is to dispatch them at once ; a palm-leaf fan is a good weapon ; knock them down and step on them. This is much better than to be annoyed by them for weeks.

BEES DURING A SCARCITY OF HONEY.

Hives should not be opened during a scarcity of honey, unless it is absolutely necessary. Robbers will come around, and then stinging will be in order. During such a time, I have occasionally fed a colony a little for a day or two, and then opened them at a time of day when there was honey in the fields, or when few bees were flying.

To-day I discovered a hive which was queenless, and the moths had moved in ; as I took out the moths, I discovered a little honey and the robbers did so at the same time. I let them eat it, as I usually do ; if I had taken it away, they would have tried to enter adjoining hives, but let them carry it off and they are satisfied when it is gone. The hive is now desolate, and I shall use the combs in building up small collonies, by removing a comb of brood from strong colonies, giving it to the weak, and putting the empty comb in the place of the one removed from the strong one. If there are any grubs of the bee-moth in them, a strong colony will soon roll them out, to the delight of an old hen, which has the freedom of the apiary.

HONEY CROP IN THE FALL.

All should keep their dishes right side up, for there promises to be a Fall flow. Two years of severe drouth killed white clover in many places, and what little bloom there was yielded sparingly. Basswood, too, had its off year in some regions. But abundant rains have fallen, and where bee-keepers are located near water courses and swampy, unoccupied lands, honey may yet be gathered. The draining of sloughs on the prairie is cutting off one source of honey supply, for where the plow and reaper go, bees stand but a poor chance. On the rough, stony land of New England, golden-rod blooms in all its glory; it is seen hugging the rocks on every hand, but on arable land there is none. Sweet clover has taken possession of Illinois, and is now the principal source of honey. It does not like kind treatment, but thrives best when run over by wagon wheels, on rough, gravelly soil.—*O. J. Farmer.*

Resin Cerate, or Basilicon Ointment.

DR. A. B. MASON.

Rosin, 5 ounces; lard, 8 ounces; beeswax (yellow), 2 ounces. Melt together, strain through cotton or linen, and stir constantly until cool.

If the ingredients are clear, the straining can be omitted. As an application for burns, it is "par excellence," and has been used in our family for over thirty years. I cannot speak too highly of it as an application in all cases of inflamed sores or wounds, or inflamed eyelids. Spread thickly on a cloth and apply to the part affected, renewing the application as often as necessary.

To show how valuable it is, I will relate two incidents: A few months ago a neighbor ran a nail into the palm of his hand so far as to raise the skin on the back of the hand. In a few hours the hand began to swell, and be very painful, followed by rapid and painful swelling of the arm. All remedies were a failure until I made an application of this ointment, and renewed it in half an hour. In less than an hour all pain had ceased, and within twelve hours the swelling had entirely disappeared.

A few days since, another neighbor was bitten on a sore on his hand by a fly, while sitting at the table. The hand soon became painful and began to swell, the swelling extending to the arm. A physician was called in, who pronounced it blood poisoning, but the treatment employed gave no relief.

Meeting him on the street with his arm in a sling, and learning what was the matter, I suggested a trial of the ointment, and gave him some. The next day he was at work as though nothing had been the matter.

I have just received the following recipe. It is tip top for a cough: Equal parts of unboiled linseed oil, Holland gin and honey. Dose—two teaspoonfuls, repeated as may be needed. I would suggest that the foregoing recipes be inserted in the next edition of the Honey Almanac.

New Philadelphia, Ohio.

Texas Apicultural Notes.

A. C. ATEN.

We are now having very dry weather in this part of Texas. It has rained but little during the last month, and cotton (the only crop not matured) is needing rain very much. With rain pretty soon it would make a good crop, but without rain the average will be poor.

While we had plenty of flowers in the Spring, and the indications were that the bees were doing well, they really gathered very little surplus, but they built up strong, and now they are booming, mostly on cotton.

Here, as a general thing, bees gather honey slowly all Summer and Fall. The wet weather in the Spring, I think, was the cause of the partial failure.

An old friend of mine, who lives about five miles from here, and whose word can be relied on, tells me that last Spring he noticed a very peculiar bee trying to rob one of his hybrid colonies. The robbers were very black, with one broad yellow band, about as wide again as the yellow bands on the Italians. They were about two-thirds as large as common bees. There were large numbers of them, and the other bees killed them in such numbers that sometimes he could have gathered up a double handful of dead ones. I wish I could have seen them, for I have never noticed anything like it among my bees. Mr. Thomas thinks his bees killed about all of them, but it took them over a week. Can Prof. Cook say what they were?

I was rather amused by an editorial in *Home and Farm* a few weeks ago, in which it was claimed that an apiary, well managed, could be made to yield an average of $135 per colony. But when his correspondents began to write letters expressing doubts, the editor said it was a mistake, that he meant to say that a good colony could be made to yield $35. To do this, at 7 cents per pound, there would have to be 500 pounds of extracted honey, which, I think, is very rarely obtained from a single colony.

When, however, Mr. Pelham, of Maysville, Ky., stated that he had made a specialty of bees for 20 years, and that for the first ten years he had an average of $7.26 per colony, and for the next 10, ending with 1890, the average was $4.41, the editor thought this was a very small yield, on an average. I think, however, that few have done much better, for that length of time.

The demand for honey at present is greater than the supply.

Round Rock, Tex., July 29, 1891.

How the Bees Act With Fruit.

C. N. WILSON.

I have been keeping bees alongside of my fruit orchard for 12 years. I grow peaches, prunes, apples, almonds, pears, oranges, lemons, limes and olives. All of my fruit commands tip top prices when put on the market, and none of my customers have complained that the fruit was injured or hurt by my bees. I find that wasps, yellow-jackets and birds will pick holes in most kinds of fruit and the bees will follow them as soon as fermentation commences in the injured fruit, and very often where fruit is injured and over-ripe the bees utilize most of it, sometimes taking all but the pit and skin. But I am glad they can utilize it, for decayed and injured fruit ought not to be put on sale by anybody.

The honey produced by my bees, is worth more gold coin than my fruit crop, and I believe in getting all one can out of any industry, and letting the best survive. So I say go in little bee, get what you can and after awhile we will divide profits. I want both fruit and bees; they seem to fit in together so nicely. But many fruit-growers seem to think it the great mission of their lives to fight and quarrel with the busy bee, and they go to such lengths sometimes as to kill the bees.

We heard of a fruit-grower not many miles from Los Angeles who hired a man at $2 a day and board to work a plank bee-trap during the Summer, who boasted that his man could crush two bushels of bees in a day with his plank trap. Yet the society to prevent cruelty to animals never looked after the matter. Since then that man has had scale bugs on his trees until life was a weariness to him, and we believe he has a few with him yet.

We find in our exchanges many articles touching the ability of the bees to puncture fruit; others again produce the testimony of official scientists, who declare that the bee cannot and does not injure sound fruit of any kind; that it is of great benefit to the orchardists by reason of its carrying pollen and distributing it among the bloom of fruit trees at the proper season, fructifying what would, without their aid, prove barren and useless bloom.

The gardeners never complain of bees—in fact most of them recognize the bee as a very useful friend. An exchange furnishes an exhaustive, unanswerable article on behalf of the bee that ought to settle the question beyond the realm of controversy:

In a recent issue of the Hanford *Sentinel*, G. W. Camp gives the following regarding the ever-recurring question, "Do bees injure fruit:" Mr. Oliver Smith informed me that the bees carried off a tray of raisins per day from his vineyard. He did not say whether they brought the trays back or not, but two of his neighbors told me that they saw the road near his place covered with bees carrying off his raisins. The bees were walking on their hind legs and each one had a raisin between its fore claws, and this is given as proof that they are enemies of the fruit-growers.

Should any one who says bees bite the raisins take the pains to examine a bee, while feeding, with a microscope, he will be surprised to learn that a bee has no biter, but has only a slender and a limber proboscis, that is as small as our finest needle, and through the hollow of this proboscis it can only take liquid food, and through it all the honey gathered has to pass. Will bees injure rasins? is the question. I say they will not. I know there are many who dispute this, and claim they have seen grapes eaten by them.

Those who make this assertion are only making a very common mistake, for if the skin of the grape is broken before the grape is dry, the juice of the grape begins to ferment as soon as it is exposed to the air; as soon as fermentation begins the bees begin to eat the fermenting juice and keep at it only when and where there is fermentation.

Now, how can a grape be ruined after the skin is broken and it has begun to sour and ferment? But, says Mr. Everybody, the bees bite a hole in the skin of the grape and that makes it begin to decay. To this I would answer, please examine a bee with a microscope, when she is feeding, and you will never accuse her of biting anything again, for, as I said before, she has no biter.

You answer, if the bees do not bite a hole in the fruit and do not work on grapes until the skin is broken, how is it that they eat nearly every grape on a tray? Certainly they do, because the grapes have been wet and it does not take long for the skin of the grape to be wet to rot a hole in it. To prove this you never see bees working on grapes that have been kept dry after they were ripe, and only after heavy dews or rain do the bees work on grapes.

In drying other fruits—peaches, apricots, etc.—we never see bees working on them when drying, except they find a piece that is overripe and has begun to decay. As fermented grape juice makes only a dark syrup, it injures the sale of any honey it is mixed with, and when bees work on it the apiarist is damaged by it. I have kept bees in connection with fruit raising for the last 10 years, and consider the work they do in fertilizing the fruit trees, when in bloom, to be worth nearly as much as the honey they gather, and I do not hesitate to say that if the bees were made to move from this vicinity the loss to fruit-raisers would be far greater than all the fruit pests ever have been to this country.—*Rural Californian.*

Los Angeles, Calif.

Artificial Heat to Promote Brood-Rearing.

SAMUEL CUSHMAN.

This is a continuation of the Report of Apiculture at the New Jersey Experimental Station, contained in Bulletin No. 7:

An experiment was begun May 14, 1890, with two colonies (Nos. 4 and 14) which had been wintered in the cellar of the station farmhouse, and were in about the same condition. Thermometers were so placed that "each hive had one in the cluster and another in the most remote part of the hive body, outside of the cluster, and both of these could be read without disturbing or exciting the bees."

When the experiment was begun four thick stone bottles, each holding a half pint, were filled with boiling water and placed back of the division-board in hive No. 4. This was renewed each morning and evening until June 20, while a record was kept of the thermometer readings for the remainder of the month. The next morning before the water was renewed the common thermometer outside the brood-nest in No. 4 stood at 68°, while in No. 14 it was at 66°. The artificial heat had apparently increased the temperature of the empty corner of the brood-chamber, leaving it at the end of 12 hours 2 or 3 degrees higher than the same space in the other hive.

The thermometer among the bees of No. 4 showed a temperature of 86°, both in the morning and at night, while in No. 14 it stood at 84° and 97°. The records for the rest of the month showed that where the heat was used the average temperature of the cluster at night and in the morning was no higher, and that when there was any difference between the two the temperature of the cluster where the heat had been given was the lower. * * *

The records also show that the temperature of the hive outside of the cluster, 12 hours after the hot water was renewed, was many degrees higher than where none had been given. * * *

The weather much of the time was very cold and changeable. The artificial heat was of the greatest value during the night and on chilly or sunless days, and better enabled the bees to cover the additional number of eggs and larvæ that they had started to rear during warm, sunny days. * * *

On May 31, at 11 o'clock, and just before the thermometers were removed for the season, the one in the cluster in No. 4 indicated 94°, and out of the cluster 73½°. The bees then covered seven combs, one of which contained honey while six were full of brood. Those in No. 14 registered, in the cluster, 94°; out of the cluster, 71°. Of the seven combs, one was empty, another was full of honey, and five were quite well filled with brood, and six of these were covered with bees.

No. 4 steadily gained in bees and brood up to June 20, when the artificial heat was discontinued. No. 4 overflowed the brood-nest long before No. 14 had used all the combs, and by July 1 occupied two brood-chambers and was about twice as strong.

Both were run for extracted-honey, and on July 18 the honey was extracted from the upper story of each. The amount obtained from No. 4 was 35 pounds, and from No. 14, 15 pounds. There remained in the lower story of the latter 3 or 4 pounds more than in No. 4. As the building of queen-cells in No. 4 soon caused us to remove the queen for a time and changed the conditions, the colonies could no longer be compared, and this ended the experiment. * * *

Before such an application of artificial heat can be generally recommended further work should be done, with the conditions more favorable for accurate comparison, and on a more extensive scale. In this case, apparently just enough heat was given, and in such a way as to increase the rearing of brood without causing an abnormal condition of the colony, a much larger amount of surplus honey being thus secured.—*Experiment Station Record.*

Cause of Short Crop in Central Missouri.

G. P. NORTON.

The question is asked me almost every day, "Why is it that the bees are not gathering honey?" To understand and answer this question correctly we must go back and review the season and its circumstances.

Bees in the hands of practical men wintered well, bred rapidly in the Spring, and the hives were overflowing with bees at swarming time. So far, so good; but they have no surplus yet, nor did we expect any up to this time—we wanted bees, and we have them.

Some early swarms had issued by June 1, but at that date a season of rain began which lasted, without abatement, almost, for three or four weeks. This long season of unfavorable weather retarded swarming, demoralized the bees, and destroyed many young queens, that took advantage of the first glimpse of sunshine to meet and mate with drones.

The swarms that issued exhausted their energies in filling the new hives with combs, under such unfavorable circircumstances that, by the time the weather cleared up, and the honey-flow came, the new colonies were too weak in numbers to store surplus, and before the young bees were old enough to gather honey the honey-flow had ceased. Hence, our failure to obtain a good crop of comb-honey.

The old colonies that were provided with queens, and doubled and non-swarming colonies run for extracted-honey have done fairly well, considering the season.

We may secure something from the Fall honey-flow, but three years' experience will bear me out in regarding Fall promises with suspicion and distrust.

CLOSED-ENDS, OR SELF-SPACING FRAMES.

On page 145 of the BEE JOURNAL, Mr. W. P. Faylor wrote very discouragingly about closed-end frames. If he had the self-spacing frames, like I am using, and would follow the directions for their use, he would find that all the objections which he mentions have been removed.

By using 9 or 10-frame hives, with a division-board made like a regular frame (except that the self-spacing part is cut off of one side of the frame of the board), when you put in the division-board as the last frame, there is a half-inch play, to allow it to slip easily into place.

Those who prefer the 8-frame hives can use them, but I will take the 9-frame hive every time, and use a division-board to assist in opening and closing the hive.

Prairie Home, Mo.

Description of My New Swarm-Catcher.

BARNETT TAYLOR.

In answering your request for a description of my method of using my swarm-catcher, I will state the cause that induced me to experiment with them: I have for some years been handling about 200 colonies in one apiary, and I had so much trouble in getting the swarms hived, that swarming time became the terror of the bee business. In 1888, I commenced a trial of Alley's queen-traps, but they only added to my difficulties; I could catch the queens, but from two to ten swarms would come out at a time, all light in one mass, and then return to other hives than the right ones. I saw that nothing but catching the whole swarm would prevent this, and commenced to experiment in that direction.

My first catchers were made 16 inches square and 3½ feet long, and with these I could catch the bees, when I could get them adjusted to the hive tight enough to prevent the bees from getting past them; but this was difficult to accomplish, and it took too long.

The next year I altered their shape and size, with decided improvement, but they were still imperfect, as it was absolutely necessary that they should be capable of being instantly adjusted tightly to the hive, by any unskilled person, to make them a complete success, and now I have accomplished that end. Those that I used this year, any bright boy of ten years can adjust to a hive in ten seconds, just as certainly as the skilled bee-keeper, provided the hives are made ready for their reception, which consists in having the bottom-board of the hives project three inches, or more, in front and be the same width as the hive.

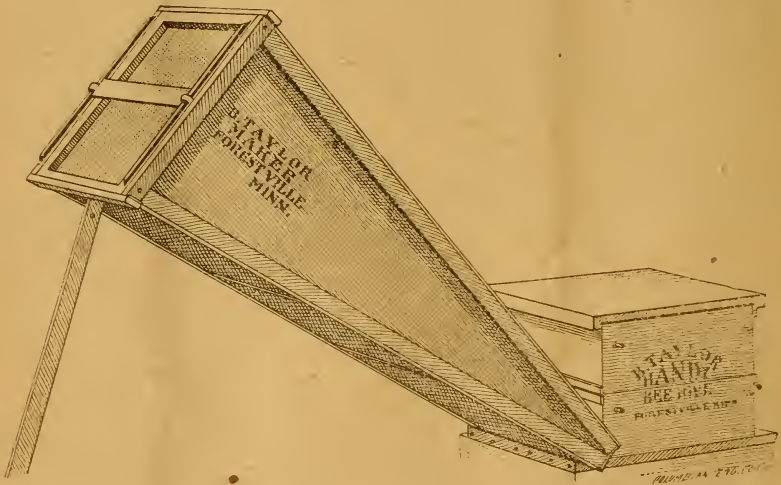
The catcher is made of a light frame of wood, 16 inches square at the large end, and 4x16 inches at the other, and 3½ feet long. The bottom, sides and two-thirds of the top, are covered with common cotton sheeting, painted, and the remaining third of the top is covered with wire-cloth. The large end is fitted with a movable frame, covered with wire-cloth, held in place by two buttons. The small end, that fits to the hive, is made of a strip of cheap carpet 3 inches wide and 16 long. When the bees are in the catcher the small end is closed by a thin board, 3½ inches wide and 16 inches long, with a piece of leather three-fourths of an inch wide, nailed across its middle, which buttons over two ¾-inch screw heads, to hold it securely in place.

In using them, I watch until I see the swarm commencing to issue, when a catcher is quickly adjusted, and in five minutes the bees are inside the catcher, and the bees that were out before it was placed, will alight on the outside, provided it is allowed to remain a few minutes for that purpose. I do not care whether I get the few bees that are flying or not, as I hive the swarm on the old stand, and the mature bees will all return to the new hive, on the old one being moved away. When the bees are in, I close the place of entrance and set the catcher, big end up, in the cellar, or in a cool, shady place, and hive the swarm at my leisure, either the same day, or the next, as most convenient.

When ready to hive, place the new hive on the old stand, spread a sheet in front, bring the catcher out, stand it on the small end, unbutton the movable end, and carefully lift it out, as nearly all the bees will be clinging to it. Shake them off in front of their hive, and they will go in, very few of them taking wing.

This season the bees have deserted their hives in this section at an alarming rate after being hived from 12 hours to 4 days; some bee-keepers losing one-half of their swarms in that way. My loss would have been very great in that way but for the catchers. When a swarm was seen coming out after having been hived, they were caught and returned to the cellar for 30 or 40 hours, and then rehived without further trouble.

I have made a square, upright catcher, which is intended to act automatically. I think I shall make it a success, and will report on further trial; but I had been laboring this year to equalize all my



SWARM-CATCHER.

swarms, and so well did I succeed that when swarming commenced I had no time to experiment—95 swarms coming out in the first five days of July. On Sunday, July 5, I had 25 swarms issue in three hours, and without the catchers it would have been impossible to have done anything with them. I never saw such a rush of bees before, but I caught and hived them all, without their getting together, or losing a single queen. I believe the catchers saved me $50 on that one day. Yes, sir, they will revolutionize the management of large apiaries, as a smart boy or girl of twelve years can use them as well as an expert bee-keeper.

I must add that I use a lath, notched on the edge, to hold the catcher up when on the hive. The catcher will fit at any angle, whether 45° or lying nearly flat. My success in using them, has caused me to make 100 artificial swarms, and again enlarge my bee business.

Forestville, Minn.

How to Find a Queen.

G. M. DOOLITTLE.

When settled warm weather comes in the Spring, it is necessary that each colony contain a prolific queen, for if the queen in any colony should be old and failing, that colony could not be brought up to a proper condition to work to the best advantage during the honey harvest. As the queen is mother of all the bees in the hive, she must be able to lay rapidly so as to increase the population of the hive, and if such an one is not in the hive she should be superseded with a better queen.

It also often happens, that the queen which the hive contained during the Fall, dies in early Spring, and in that case it is absolutely necessary that the bee-keeper knows it, else that colony will perish, for the bees which have been wintered over, rapidly die off with the work which now devolves upon them, for old age is brought upon the bees sooner or later, according to the labor which they perform.

There is no way of knowing to a certainty what is going on inside, except by opening the hive and inspecting the frames. To know if there is a queen in the hive, look closely at the combs, and if no eggs or small larva are found in the bottom of the cells, at a time when the bees begin to bring in pollen in the Spring, you can reasonably expect that they are queenless, while if the eggs are few and scattered about in different cells, without regularity, the queen is unprolific.

To be absolutely sure that a colony is queenless, take a frame of comb having eggs and little larva in it, and put it in the center of the supposed queenless colony, leaving it for three days. If queenless, queen-cells will be formed over some of the little larva, while if no such cells are started, rest assured that the bees of this hive have something which they are respecting as a queen, and which must be found before a good one can be introduced.

To the accustomed eye of the practical apiarist, prolific queens are easily found, especially if the bees are of the Italian race; but a virgin queen is often hard to find by an expert. The best time to look for a queen is about 10 o'clock, on some bright, warm morning, when the most of the old bees are in the field after pollen and honey.

Open the hive carefully, taking out the frames slowly, and making sure that you do not hit them against the sides of the hive or anything else, so as to make the bees nervous, thereby setting them to running or stinging. When you have the first frame out, look it over carefully, and if you do not see the queen, set this frame and the next one in a box, or in some secure place where you can leave them out of the hive till you look the others over.

After these two are out, you have the hive so that you can see down into it quite well. On taking out another frame, glance down the side of the next one in the hive, when the queen will often be seen running around to the opposite or dark side of the comb, for young queens are shy. In thus running she shows the sides of her abdomen, to the eyes looking obliquely down, to a much better advantage than could be if the eyes were looking directly upon her back. If you do not see her, look on the opposite side of the comb you hold in your hands, looking obliquely as before, for she will be on one of these dark sides if anywhere on the comb. In this way keep on until she is found, or all the frames are taken from the hive. If unsuccessful, close the hive and try again in an hour or so, when success will attend your efforts.—*Rural Home.*

☞ The sewing machine I got of you still gives excellent satisfaction—W. J. PATTERSON, Sullivan, Ills.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Sept. 3.—Susquehanna County, at So. Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

Oct. 14, 15.—S. W. Wisconsin, at Fennimore, Wis.
Benj. E. Rice, Sec., Boscobel, Wis.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—P. H. Elwood....Starkville, N. Y.
SECRETARY—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

Bee and Honey Gossip.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Cannot be Excelled.

Bees are doing well here, having cast from three to five swarms per colony, and are gathering honey very fast. This is a good country for bees, and the quality of our honey cannot be excelled, and the comb is as white as white clover. All the clovers do well here.

E. J. ROCKEFELLER.
Oklahoma City, Oklahoma Ter.

Good Prospects for a Fall Crop.

We are having plenty of rain, and the bees are gradually gathering a little more honey. Prospects are exceedingly good for a Fall crop. White clover yielded a very light crop in this locality. I have never found a set of brood-frames that did not have more or less burr-combs built between the top of them and the section cases, but when a wood-zinc honey-board is used that trouble is entirely obviated. I am prepared to say that the wood-zinc honey-board does not lessen my honey crop to any appreciable extent. I cannot become reconciled to closed-end brood-frames, but perhaps the Hoffman frame might prove more satisfactory. When I use Dr. Miller's tent bee-escapes, which he recommends to prevent robbing, the bees crawl out all right for a time, until robber bees begin to catch the escaping bees and take their honey from them, and finally such a crowd of robbers cluster on the top that none of the bees can escape without being deprived of their honey. With a good bee-escape underneath the surplus case there will be no such trouble. Eight-frame hives are fast coming into use here, with loose, cleated bottoms and tops.

FRANK COVERDALE.
Welton, Iowa.

Selling Bug-Juice.

On page 136 you say it is criminal to allow any bug-juice to be sold as honey. I will say that I *know* that thousands of pounds of it are being placed on the markets. It makes me feel pretty badly to think they sell this stuff, when my good golden-rod honey goes begging in Chicago at 9 and 10 cents, because the dealers do not want the capping yellow.

R. S. BECKTELL.
Three Oaks, Mich.

[To say that it is sold by some unprincipled persons does not excuse them. It is a crime nevertheless. To sell anything for honey, which is *not* honey, is a *crime!* No matter whether it be glucose or bug-juice. It is dishonest.—ED.]

No Fear of Low Prices.

Bees have been doing well, but at present no honey is being gathered, which is probably owing to the recent heavy rains, and sections have to be taken off in order to prevent yellow combs. The present indications are that a low price for honey is not to be feared. The bees are now busy in rearing brood, and, of course, what honey is coming in goes to the brood.

S. M. CARLZEN.
Montclair, Colo., July 29, 1891.

He Should be Exposed.

I had some trouble in securing goods which had been ordered from ———, and I think he should be "shown up." Last Winter I wrote to him for prices on 200 T tins, 14½ inches long, and 2 pounds of wire nails, ⅝ inches long. His answer was that the T tins would be worth $2.00, and the nails at market price. I ordered 136 T tins 14½ inches long, and two pounds of the wire nails. On arrival I found the T tins to be 13½

inches long, and the nails were clout nails. With the above, I had ordered a tested Italian queen, price $3.00, to be sent in April, at his risk; but he did not send her until May 8, and she was so near dead that she could not crawl when she reached me, on May 14, and died that afternoon. I sent the queen back to him, and also the tins and nails. I wrote him twice after that, and the last time, about June 24, I said that I would have him reported if he did not send the right tins, nails, and a good queen, or refund the money. July 3 he wrote that he did not have the tins of the proper length, nor nails of the right size, and returned the money for them, saying that he would send the queen as soon as he could determine what the bees were, since which time I have heard nothing from him, nor received the queen, and I should like to have him reported. I could not keep bees without the BEE JOURNAL, it gives so much valuable information. It is worth five times the subscription price. JAS. P. GOODWIN.
Danbury, Iowa, July 27, 1891.

[If this is a fair statement of the transaction, there can be no excuse for such unbusiness-like conduct. We withhold the name so as not to injure the business of the supply dealer, and give him an opportunity to make reparation. If he does not do so, we may give his name and address in the future.—ED.]

Not First-Class.

The honey crop will not be first-class in this part of the country. The weather has been very cold for this time of year, but is warming up now.
BARNETT TAYLOR.
Forestville, Minn., July 27, 1891.

Poorest Honey Crop Ever Known.

The honey season is over in this locality, and it has been one of the poorest ever known. I had to feed all my bees up to July 12, to keep them in good condition, for the basswood, that looked so promising; but when it came into bloom the weather was everything but what it should have been, and between the wind and cold, rainy weather the bees could not work, and the result is there is but little surplus in the hives to take off. There was quite a frost in this section last night. IRA BARBER.
DeKalb Junction, N. Y., July 31.

Porter Bee-Escape.

I wish to add my hearty endorsement of the Porter Bee-Escape. It is a most excellent implement. Ruse is worthy of great praise for bringing this idea before the bee-keeping public. Dibbern should have recognition for his suggestion, but the Messrs. Porter have so perfected the instrument, that success is certain in every case. Like the bee-tent, this invention is worthy a place in every apiary, and its merits are so patent that it will soon take this place. No bee-keeper can afford to be without it.
A. J. COOK.
Agricultural College, Mich.

Black vs. Italian Bees.

Yesterday I lifted the super from a hive containing black bees, for one of my neighbors, and found the honey to be very dark. It tastes like sorghum molasses which has been made from frozen cane. It is "bug-juice," of course. From my Italians I have taken 42 sections of honey, gathered during the same time as the above, and find it so clear that you can see through the honey, and it is of as fine flavor as any one could wish for. Who will say that black bees are as good as any? J. H. BERRY.
Gales Creek, Oreg., July 30, 1891.

Spraying Trees.

There is no use in talking, we must prosecute the first man spraying trees when in full bloom. The law provides ample punishment for any person convicted of putting out poison.
Duester, Wis. H. O. KRUSCHKE.

Best Crop for Four Years.

My bees have done better this Summer than any season during the last four years, and the same report comes from nearly all bee-keepers in this vicinity. I think we have had more rain this year than formerly. FRANK HENTRICK.
Wall Lake, Iowa.

Fall Honey-Flow.

One of my neighbors lost 2 colonies of bees lately. When he examined the hives he found them full of honey and bees, but no queen, nor brood. Neither colony had cast a swarm this season. What became of the queens? Did the bees supersede the old ones, and were the young queens lost on their wedding flight? Honey-dew was very plentiful this season, which is something unusual in this locality. I have been bothered with grass growing around my hives, and have pulled it up, and clipped it off, but it still grew. Then I took a hoe and scraped it off in front of the hives, and do not think it will grow so fast now. I think we will have a good honey-flow this Fall from river weeds and stick weeds. A. C. BABB.

Greenville, Tenn.

[The colonies were doubtless rendered queenless in the manner you suggest, but not being conversant with the circumstances and surroundings, we are unable to give a positive opinion. The answer by Mr. Doolittle, to Query 756, page 345 of the BEE JOURNAL, might prove of benefit to you in your battle with the grass.—ED.]

Honey Crop Two-Thirds, so Far.

My report for this year I will send in when the season closes. My average is about two-thirds of a crop. Have sold 2,680 pounds of extracted, at 8½ cents per pound, kegs returned. I have been offered 15 cents for comb-honey, but think 18 cents is not too much. I have about 450 pounds on hand, and about 200 pounds to be taken off.

WM. SEITZ.

Hustisford, Wis., Aug. 7, 1891.

Due to Gentle Manipulation.

1. Do the Italians ever come up over the top of the frames in a threatening manner and fly out and sting one, like the blacks? 2. Are the Albinos as hardy as the Italians, *i. e.*, do they winter as well? 3. Are all the progeny of an Italian queen that has been fertilized by a black drone, vindictive.

I. F. DIAMOND.

Fly Mountain, N. Y.

[1. No.

2. Many think that they do not winter quite as successfully, but it has not been fully demonstrated.

3. No. Gentle handling has more to do with the docility of bees than many imagine. Some hybrids are more amiable than pure Italians. This is accounted for by the gentleness with which they are manipulated.—ED.]

Bees Killing Their Queen.

The honey crop in this locality is not as abundant as was expected by the way the bees worked in the early part of the season. They are gathering some light honey now which is very nice, and also some dark honey, but I do not think it is any darker than some that I have had at different times within the last few years. While I was examining my bees, lately, in one colony, I noticed that the bees were killing their queen. She seemed to be nearly dead. I found no other queen in the hive. I have never found such a case before, during my ten years' experience, in bee-keeping, and would like to know the cause of it.

MRS. E. L. SEALS.

Dixon, Ills., July 27, 1891.

[The case as reported, is unusual, Without knowing more about it, I am unable to say why the queen was killed, and indeed I might not be able to tell any better if I knew the circumstances in full. Sometimes bees do things without any apparent reason for it.

The queen may have been injured in some way the last time the hive was opened, or, indeed, at the time the trouble was discovered. Possibly the bees had tried to swarm, and the old queen was not able to go with them, in which case they might ball her.—C. C. MILLER.]

Less than Average.

In some localities there has been an excellent honey-flow, but generally, I believe, the crop will be slightly below the average. There has been very little swarming. R. F. HOLTERMANN.

Brantford, Ont.

Bees Not Swarming.

I have 8 colonies of bees, but none of them have cast swarms this season. Last year I had but 2 swarms from 8 colonies. I think I should like the Punic bees, if they are as represented, but desire more information before investing in them.

GEORGE HODGE.

Belmont, N. Y., Aug. 14, 1891.

Clubs of 5 New Subscriptions for $4.00 to any addresses. Ten for $7.50.

Wavelets of News.

Sweet Corn as a Honey-Plant.

I have been watching with interest the bees working upon the tassels of the corn, and I have come to the conclusion that they gather honey as well as pollen, for they dive deep into the bloom, away from the pollen dust. Corn fields will be quite an attraction this Fall for bees, as the rains have brought up *Polygonum pennsylvanicum* since the last plowing, and also where early potatoes have been dug. Some seasons this plant yields white honey abundantly of a pungent flavor, disagreeable to some persons. A few years since, the Sny levees in the western part of the State, bordering the Mississippi River, were overflowed in June, and the crops destroyed, when this plant, which some persons call smart-weed, took possession, and thousands of acres were waving like billows of the sea. Messrs. Dadant, of Hamilton, Ills., moved their bees thither, and were well paid for their work.—MRS. L. HARRISON, in the *Prairie Farmer*.

Lifetime of the Bee.

Some think that bees that have a queen do not live more than 45 days, during the swarming season. Old bees may not live more than 45 days. If, however, we set a comb of hatching Italians, that will come out inside of five days, in a black or Carnolian colony, they are not likely to die in 60 days.

Some seasons bees die more rapidly than at others. It depends greatly on the amount of labor necessary for them to perform their ordinary duties. For instance, in very windy weather, or in a windy locality, bees wear out much faster than they do when the air is still. The same thing is true if they have a long way to go to gather their stores.

What veteran bee-keeper has not frequently noticed how quickly the hives will depopulate on windy days in Spring?

The bees become worn out when they have to put on extra efforts to fly against the wind; and this is a point that should guide people in situating their apiary. As far as possible they should select a sheltered locality, and the shorter the distance the bees have to go to gather their stores, the longer they live.

Take two colonies of equal age and strength, one having to gather its stores from two to four miles in an unprotected locality, while the other is situated in a protected spot, and gathers its stores around in a radius of a mile, the one would live about a third longer than the other.

The amount of exertion the bees have to make indicates, to a great extent, the time they will live, and the less work they have to perform the longer their vitality lasts. For instance, when bees live six or seven months in winter quarters, and when set out be apparently as young and lively as when put in, in the Fall. Locate your bees as favorably as possible, and they are likely to live a great deal longer. We believe fifty colonies favorably situated, will produce as much as 100 unfavorably situated.—*Canadian Bee Journal.*

Sweet Prospects.

Last season was a discouraging one to the bee-keeper in this part of the country. It is, therefore, a matter of more than usual interest to record that the present year cheers us with a lively hope of a fair harvest at least.

The fine weather in early Spring, with abundant fruit and dandelion bloom, caused the bees to build up rapidly. Sufficient and timely rains gave us the best growth and bloom of white clover we have had for several years. A constant succession of other honey-yielding flowers kept the bees well supplied, and thus encouraged they began swarming early in June and were well nigh over the swarming fever before the blooming of basswood.

This is our best honey plant, and while it lasts the bees store rapidly, if strong enough to enter the surplus boxes. Basswood opened this year about July 8.

There are certan conditions of the atmosphere—electrical or otherwise—favorable to the secretion of nectar in flowers. Blossoms alone are not proof of the presence of honey.

Some seasons nectar secretion is much more abundant than others, when to the eye no reason is apparent.

This year the conditions seem to be favorable. If the Fall flowers yield as abundantly as those already in bloom, or past, we shall exhibit to our friends a less elongated expression of countenance than in the Fall of 1890.—EUGENE SECOR, in *Iowa Homestead.*

We Club the American Bee Journal and the Illustrated Home Journal, one year for $1.35. Both of these and Gleanings in Bee Culture, for one year, for $2.15.

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OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

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ALFRED H. NEWMAN,

BUSINESS MANAGER.

Special Notices.

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☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to pay for another year.

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☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

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We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The 7 above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
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Orange Judd Farmer	2 00	1 75
Farm, Field and Stockman	2 00	1 75
Prairie Farmer	2 00	1 75
Illustrated Home Journal	1 50	1 35
American Garden	2 50	2 00
Rural New Yorker	2 50	2 00
Nebraska Bee-Keeper	1 50	1 35

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

◆

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

◆

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

◆

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

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THOMAS G. NEWMAN,
EDITOR.

Vol. XXVIII. Aug. 20, 1891. No. 8.

Editorial Buzzings.

Do Not Risk the so-called honey-dew as Winter stores for your bees. In all probability it will be no better than grape juice and the like, and the natural result will be bee-diarrhea.

Bees Have Claws by which they can stick to a board upside down, explains Dr. Miller in *Gleanings*, but if it is glass the claws will not hold, and then an oily secretion of the foot allows them to stick. Wet the glass and the oily foot will not stick, and down comes your bee.

Prof. A. J. Cook says that he should expect no detriment from eating poisonous animals like centipedes. Even the venom of the rattlesnake or copper-head is harmless if taken into the stomach, though deadly if injected directly into the blood.

A Castle in Beeswax.—Among the entries at the Detroit Exposition this year, says the *Michigan Farmer*, is a castle, or cathedral, 32x8 feet in dimensions, with a tower 18 feet high, with a clock. The entire building will be constructed of beeswax and honey. This singular and very handsome structure will be one of the great attractions of the bee and honey department.

We fully intended to be present and see the structure, but we have an engagement in New Jersey at the same time, and must deny ourself the pleasure of meeting the friends and seeing the sights at the Detroit Exposition.

Paris Green, says a correspondent in the *Wisconsin Farmer*, is not only a dangerous poison to handle, but it is also injurious to the soil. Those who persist in using it upon the trees while in bloom, may yet find that it is like a two-edged sword, which cuts both ways.

T. A. Riggs, Brighton, Colorado, has one of the largest apiaries in that State—numbering 150 colonies. During July his bees averaged nearly 1,000 pounds of comb-honey per week. Some colonies exceeded 1,000 pounds. He is a happy man, and smiles while many others are dejected. Colorado is coming up, as a honey-producing State.

W. Lummel, Wisner, Nebr., has sent us a flower and desires to know what is its name. "It is a species of milkweed," says Prof. C. M. Weed, probably *Asclepias cornuti.*

A "Bee-Escape" is, in England, denominated a "super-clearer;" and a "hive bottom" is there called a "floor-board." An "alighting board" is there named a "flight-board;" and "apiarian supplies" are called "bee-appliances and bee-furniture." Why should there be such a difference in these names by an English-speaking race?

Colony or Swarm—Which?

The following is a reply to our article on page 72, on the above subject:

In my article, on page 72, on the above subject, I said that I never heard a good reason why I should change the word swarm (to represent bees in a hive) to the word colony. I have read carefully and re-read the criticism of my article, expecting to find a reason for the change, but I have looked in vain.*

After giving Webster's definition of swarm, as: "especially a great number of honey-bees which emigrate from a hive at once, and seek new lodgings under the direction of a queen; or a like body of bees united and settled permanently in a hive;" the editor says, "if the statement in the last line must settle the matter, how about the sentence preceding it, viz., that the bees 'seek new lodgings *under the direction* of a queen!' Does that *settle that matter, too?* Every well informed bee-keeper will dispute that assertion in the Dictionary!"

I cannot see that the error of belief in the office of the queen, has anything to do with the fact that bees in a hive were called a swarm. And if it invalidated the definition when applied to bees in a hive, it would invalidate it when applied to bees in the air; and, in fact, invalidate the whole Dictionary.†

The editor says, that the definition given to colony, as, "A number of animals or plants living or growing together," is the only one applicable to bees. Well, that does not mention bees. To be sure they are animals living together, and may be claimed as embraced in the definition. And as bees are not mentioned in defining colony, and as they are mentioned as being a swarm when in a hive, I claim that I have the case.‡

In the next paragraph I find the following sentence: "The use of the word swarm for colony cannot be justified by any rule of the language!" Is there any "rule of the language" that prohibits its use? Until a rule that prohibits it is cited I can see no reason why it is not perfectly proper to use it if one prefers. One other thing: The word swarm is not marked "obsolete," as is the case with many words.‖

Reading the criticism further, I find the following: "Because it was erroneously called a swarm in 'ye olden time,' no more proves its *correctness* or propriety, than when the only perfect female in the hive was called a *king!!*"

What proof is there that it was, or is erroneous? That is the question under consideration. Proof is what is wanted. I have good authority on my side.

I will also quote the following language of the criticism: "A swarm issues from a hive for the purpose of increasing the families or colonies, but when it settles down to the business of house-keeping it is a colony, and not a swarm!"

Webster says it is a *swarm*. I have now done, and am willing to leave the case with the intelligent jury, which consists of the readers of this excellent periodical.

I believe in progression—eternal progression—and would not "set my face against the river's course," nor "butt at the storm with my puny form."

E. L. Holden.

North Clarendon, Vt.

* Friend Holden seems to entirely mistake our argument. He quoted from Webster's Dictionary a sentence which had *two* errors in it; and, while he repudiated one error, he tried to prove his point by the other! In order to show the fallacy of such an argument we asked: "If the statement in the last line [which we claim to be an error] must settle the matter—how about the sentence preceding it?" [an evident error, admitted by all intelligent apiarists] and we asked: "Does it settle that matter, too?" This we now repeat, with emphasis.

The point is this: Is the Dictionary infallible? We emphatically say, no! and this we prove by *facts*, admitted by all intelligent apiarists—including Mr. Holden. Then we argue, that if it has made a mistake in one thing, it might have made an error in another—in fact, we claim that in the one sentence quoted by Mr. Holden, it has made two serious blunders. On either point its statement is worthless, and proves nothing!

† It is true that the erroneous statement made by the Dictionary about "the office of the queen" does not necessarily invalidate any of its other definitions, (much less the whole Dictionary,) but if one of its assertions is untrue, it cannot be deified with infallibility! And when it defines the word "swarm" to mean a

"body of bees, united and settled permanently in a hive," it contradicts not only itself but other lexicographers, and confounds the use and meaning of terms.

Worcester's Unabridged Dictionary defines the word "swarm" as "a cluster or great number of insects, or small animals, particularly of bees *migrating from the hive.*"

In fact, our word swarm comes from the German word schwirren, and means "to whiz; to buzz; a tumultous mass." While the latter is applicable to a swarm, it is totally inappropriate when applied to an organized body of bees settled permanently in a hive, where order reigns! Tumult is disorder, noise and confusion—the opposite of contented, peaceful work.

‡You must not be too fast, friend Holden, in claiming the case. That definition of colony—a number of animals living together—sweeps away all your props. The term "animal" *does include the bee*, as well as man; and hence is as appropriate to an organized body of bees living together, as an organized body of men and women. It is quite correct, proper, appropriate, precise, and faultless, to speak of either as a colony, when they have migrated from the parent home, and settled down in an organized body to keep house and work for the general good.

‖ It is unwarranted, and quite incorrect to claim that we must cite a "rule" to prohibit Mr. Holden from calling such a body of bees a "swarm." He might as well demand such a "rule" to prevent him from calling the only perfect female in the hive—*a king!* He could cite its use by the brightest of the Roman poets—and prove by books innumerable that it is right! No "rule" prohibits it!"

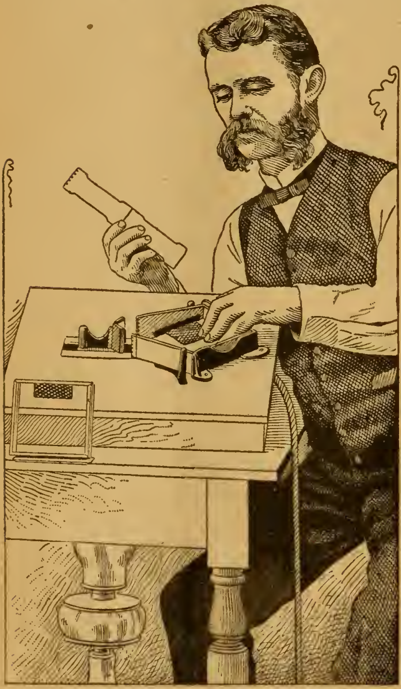
But there is no reason for prolonging this good-natured controversy. Enough has been said to convince "the intelligent jury" of the correctness of our position, and to our readers we leave the verdict—remembering that "when one is convinced against his will, he is of the same opinion still."

New Varieties of Bees.—On the subject of improving the honey-bee, and the introduction and acclimatization of desirable bee-forage plants, by the Department of Agriculture, and the work that the Department is now planning, with the advice and assistance of Prof. A. J. Cook, we find the following in *Insect Life*, which will furnish encouragement and food for thought to every intelligent bee-keeper in America:

> While little attention has so far been given by the diffirent stations to the subject of apiculture (except at Lansing, Mich.) it is nevertheless an important branch of economic entomology, and there is much promise of good results yet to come from careful experiment and investigation.
>
> One of the most inviting fields, is the search for and introduction of new varieties and species of bees; for just as American apiculture has profited in the past by the importation of races like the Italians, Syrians, and Carniolans, there is every prospect of further improvement by the study and introduction of such prominent races as are either known to occur or may be found in parts of Africa and Asia. *Apis dorsata* is believed to have many desirable qualities, and private efforts have already been made to introduce it, and have failed chiefly for want of means.
>
> The further study of desirable bee-forage plants, and the introduction and acclimatization of such as are known to be valuable to parts of the country where they do not yet occur, are very desirable.
>
> Much has yet to be done, also, in the line of systematic breeding, and we should be able to make rapid advances in the amelioration of existing races by proper selection, if we could assume practical and ready control of the fertilization of the queen.
>
> In these directions we are now planning, with Prof. Cook's aid, some effective work, but the introduction of foreign bees, which the Department should be able to undertake to better advantage than any private individual or State institution, is rendered more difficult by virtue of the restrictions of the appropiation; and whatever is done in the other directions by the National Department will be done most advantageously through the co-operation of one or more of the State stations, many of which are far better equipped, and more favorably situated for apicultural work, than the Department at Washington.

The Section Press and Foundation Fastener, combined, mentioned last week on page 203, is made by Mr. W. O. Leach, Coldwater, Ontario. We herewith give an illustration of it, so that our readers may get an intelligent idea of its use and how to operate it. It is placed in our Museum for the inspection of visitors. Mr. Leach writes thus about it:

By its use I can put the foundation in the sections quicker, out of the flat, when moistened, than I can after the sections are closed. To close the sections it has no equal for speed, after taking off the heater-plate attachment. After closing the section, relieve the treadle altogether, so as to bring it back to its starting place again.



It works to my complete satisfaction, and I use it every day, both for folding sections and fastening the foundation in them. One would hardly believe that it could save so much time, while handling the sections and completing them all at one operation. It requires but little practice to operate it quickly and successfully. W. O. LEACH.

Beeswax Bleaching.—Inquiries often come for information on the above. The following appeared in the New York *Voice* in answer to a query on the subject, and will be interesting to those who wish to know all about the bleaching of beeswax:

The commercial way of bleaching beeswax is as follows:

The wax is melted in a large tank, at the end of which is a wooden cylinder turned by hand, while the melted wax is running over it. The cylinder being half in cold water, and consequently always wet, causes the wax to flake off into the water; it is then put on large cloth screens supported by legs about half a yard high, and is put out into the light and air to bleach. After it has been out about a week, the same process is gone through again, and by another week or so it is white.

This can be done on a smaller scale by pouring the melted wax on the surface of warm water to form a thin sheet, and then putting it out on cloth to bleach; or another way is to put wax in cold water, let it come to boil, cool the water, and a thin sheet is formed on the water which is put out to bleach in the same way.

There is also a way to do it chemically, which I copy from a book which we have:

Heat wax to about 212° in an iron vessel lined with lead; add chloride of lime, either dissolved in water or dry; and stirred with a wooden spatula. When these materials have acted on each other long enough to discharge the color from the wax, the chloride of lime is removed by the addition of diluted sulphuric acid. The whole is then to be boiled until the alkali is separated. The solution of the chloride of lime in proportion of 20 pounds to 112° of water, and an equal quantity, by weight, of wax.

The sulphuric acid should be of the specific gravity of 1.8, and be diluted with 20 times its weight of water.

* * *

Egyptian Bees, found in Egypt, Arabia and Asia Minor, have yellow bands, and are smaller than Italians. Although they have long been domesticated in Egypt, where floating apiaries are common, they have been found to be vicious, by European bee-keepers who introduced them.—*Exchange.*

Honey Crop Predictions.—The following was sent for publication six months ago. We declined to publish *it then*, because we do not propose to become an instrument of discouragement to bee-keepers, on a very great uncertainty, when they had already experienced two or three years of failure. It was bad enough, if it must come, without the torture of anticipating it. We then wrote Mr. Wilson thus: "Your prediction is recorded here. If it becomes true then you can refer to it; if not, there will have been no harm done. If it were published and failed, there would be cause for disgust."

We now publish it, as promised on page 205 of last week's Bee Journal. Mr. Wilson wrote thus:

I agree with A. N. Draper (page 124) as to the great advantage it would be (or is) to a bee-keeper to know five or six months in advance, what the honey harvest would be. But I doubt if you would believe me were I to say that I could tell you *now* whether we are to have a good flow next Summer or not. To convince you that I can tell, however, what the honey-flow will be, I will state to the bee-keepers of Illinois and Iowa, that without doubt basswood and white clover will prove entire failures in the States named. It does not matter how much bloom there is, it will yield no nectar.

In North Central Iowa, in the southeastern part of Franklin County, in northeastern Hardin County, in western Grundy County, and in the southwestern part of Butler County, they will have the best honey-flow from basswood and white clover of any part of the State, but not much there, and in the adjoining counties it will be better than in the remainder of the State.

In Illinois there will be a failure of white clover and basswood, except in the extreme southern part of the State, where there will be a good honey-flow, if it ever produces well in that part of the State.

It will be very easy for bee-keepers to foretell a failure of basswood and white clover, from five to seven months, when they know the true cause of its failure to furnish nectar. I have known for several years the cause of its failure, and time will prove the truth of my statement.

When the true cause of failure of the honey crop is known (which will be soon), we will know the amount of supers needed, and will also see the need of the divisible brood-chamber hive, for with that hive we can rear bees in abundance for a good season, or less for a poor season.

Then migratory bee-keeping will become more practical than ever, because bee-keepers will know where to take the bees.

All intelligent bee-keepers will learn before long that it is not electricity, thunder, cool nights, nor wind in a certain direction that causes the failure of basswood and white clover.

It is reported that Mr. Coe, of Windham, N. Y., is going to Colorado with his bees. He is probably disgusted at the recent failure of the honey crop; but he had better stay where he is, for there will be an exceedingly good honey-flow around Windham. Samuel Wilson.

Cosby, Tenn, Feb. 3, 1891.

If I will write out the cause of the failure of white clover and basswood to produce nectar, will you publish it? I desire to show that I am first to discover the cause of such failure. S. W.

Cosby, Tenn., July 28, 1891.

That is exactly what we desire Mr. Wilson to do—give us the facts upon which he based the foregoing prediction. If he will furnish us the information, as indicated in his proposition of July 28, we will cheerfully publish it, for the instruction and benefit of bee-keepers who are dependent on the white clover and basswood for their crop of white honey.

* * *

A Sample of yellow clover came from Mr. S. D. Booher, Danbury, Iowa, who wanted to know its name and value as a honey plant. Prof. Weed says that it is *Trifolium granarium*, and that it is probably a good honey producer.

* * *

A Honey Festival is the attraction up in Minnesota. In the Waterville *Advance* for August 5, we notice the following item:

The free honey festival for the children of Waterville, under 13 years of age, will occur on the 12th inst. for girls, and on the 13th for the boys, at 4 p.m., at my old residence. Others supplied at a nickel apiece. Honey Haskin.

The Latest Bee-Escape made by Mr. C. H. Dibbern, is illustrated on page 253. We intended to have inserted the engraving in the reading columns, as stated in our last issue, but Mr. Dibbern sent it, with an accompanying advertisement, and we were compelled to let it appear in the advertising department.

The interior arrangement may be seen through the wire cloth—for lack of better descriptive words in our last issue, we called it a "Chinese puzzle, or labyrinth," because the latter is defined as a place of intricate passageways. Now, every reader can examine and name it to suit his fancy. Mr. D. calls the Escape "The Little Giant"—quite expressive. The escape proper is 2½x5½ inches. We measured from outside to outside, when giving dimensions of it on page 203.

◆

A Specimen of motherwort is sent by Mr. Joseph Mason, Wallace, Ill., stating that it is a great favorite with his bees, growing in waste places. He asks its name and value as a honey plant. Its botanical name is *Leonurus cardiaca*, and bees work on it from the time it commences to bloom until the last blossom withers. It produces excellent honey, in liberal quantities.

◆

We Congratulate friend A. N. Draper upon the arrival of a bouncing boy, on August 2, as a regular boarder at his residence.

◆

Queens are now cheaper than at any time during the year, and this is the best time to re-queen colonies, if new blood is desired in the apiary.

◆

The Palsy or shaking disease, among bees, is again reported. It is also called "the nameless disease." To give the bees a new queen will usually cause it to disappear. Feeding the bees with salted water, in the open air, has been very successful in curing the disease.

Grubb's Patent (?) Frame.—In reference to this matter, mentioned on page 168, we have received the following testimonies:

I used the frame illustrated on page 168, some 15 or 16 years ago. The first foundation that came to this locality was bought by Mr. John H. Hodgkins and myself, and used in that kind of a frame. We discarded it, having obtained a better frame.—H. W. CONKLIN, Rockton, Ills.

Mr. John Klich, of LaCrosse, Wis., has been using a frame similar to the one illustrated on page 168 of the BEE JOURNAL, for the last 12 years, the only difference being that Mr. K. uses melted wax instead of the V-shaped piece of wood to hold the foundation in place.—C. F. LANG, LaCrosse, Wis.

Fourteen or fifteen years ago I used the same device as is illustrated on page 168 of the BEE JOURNAL, for holding foundation in place. I learned of it from Henry W. Conklin, of Rockton, Ill. How long he had used it previously, I do not know.—C. H. STORDOCK, Durant, Ills.

◆

The Medal engravings were not ready in time for this issue of the BEE JOURNAL, but will appear next week.

◆

Mr. Charles Dadant called at this office on the 12th inst., on his way to Sturgeon Bay, Wis., where he goes annually, to escape the hay fever. He was accompanied by his wife, and they will remain in Northwestern Wisconsin for several weeks.

◆

The Honey Crop of E. France, Platteville, Wis., is not so bad—30,000 pounds.

◆

☞The Springfield Exposition opens on Sept. 7, 1891. On Tuesday of that week the bee-keepers are requested to meet, at 1 p.m., at the office of the President of the Board, to formulate a programme for the annual meeting. The average attendance at the Fair for the past two years has been 50,000. There are hundreds of bee-keepers among them every day, and the above meeting should be largely attended.

Honey Crop in England.

The past few seasons have been discouraging, but this year the bee-keepers have reason for rejoicing, as will be seen by the following from the *Bee-Keepers' Record:*

It may be taken for granted that the honey-gathering for the present season is so far very satisfactory, and that a fairly good crop has already been secured; while, if the present fine weather continues for another week or ten days, the harvest for 1891 will be an excellent one. Reports continue to reach us of capital "takes" in a good many quarters, and a hopeful feeling seems to prevail everywhere, which is very gratifying after the depression caused by several bad seasons in succession.

Bee-keepers are, as a rule, sanguine men, and it unfortunately happens that persons of that temperament find it very hard to look on with stoical indifference while the rain is washing out the figures in which they have been reckoning up their honey gains, or while leaden clouds overhead darken their bright visions of sunshine and abundance of nectar, pictured in the near future. We have gone through all these phases of the bee-keeper's hopes—sometimes realized, and, truth to tell, not seldom disappointed—but we were never so impressed with the comparative "littleness" of the bee-man's interest at stake, when compared with those of the fruit-grower, as during our new experiences of the last few weeks.

We have seen hundreds of anxious men, women and children waiting for the sunshine and the consequent ripening of strawberries in the fields of Kent—the growers, also, equally anxious as themselves, with thousands of bushels of fruit ready for gathering "if the rain would but go off"—and we have felt very small indeed when thinking of our own "chafing" because of the enforced idleness of our few colonies of bees from the same cause.

And then, when a bright, warm morning made the air ring with the merry hum of the bees tumbling in, honey-laden, to the few hives we call our own, we have passed through the same fruit-fields, and seen such a sight! the bright green of the strawberry foliage darkened by the motley, busy crowd of "pickers," let loose by the sunshine, and gathering in the crop at "piece-work prices."

Broken down perambulators, wheeled under the shade of trees, were there by the dozen, containing babies of all ages, tugging away at empty feeding bottles, and tended mostly by an elder brother or sister, who had reached the mature age of three or four years. All members of the family beyond that age were busily picking.

It formed a curious and interesting scene to one unaccustomed to the extent of the fruit-farming industry in Kent, and, as we have said, it tended to subdue any disposition towards grumbling at the weather misfortunes a bee-keeper has to endure. Here were whole families of poor people who traveled weary miles to earn a few shillings in the fruit-fields, and while the weather was against them, they, like the bees, looked on and could do nothing.

But at last the sun shone on fruit-growers and fruit-pickers, on bees and bee-keepers, and all were made merry accordingly. Moreover, it is a fact that the honey of this year, like the fruit, is of capital quality and likely to sell well. A few days ago there appeared signs of mischief from an excess of honey-dew, but that trouble appears to have passed away, and the clover honey now being gathered is as good as was that from earlier plants a week or two ago.

There seems to be a general brightening up of the prospects of bee-keeping, not only by reason of a probable good harvest, but bees in poor health are feeling the benefit of a rapid inflow of natural food, which assists them in resisting premonitory symptoms of disease.

But besides this, there is cause for congratulation on all sides at the general prospects of the pursuit; bees have increased well by swarming, while swarms appear to be doing so well that few will have failed to gather sufficient natural stores to Winter on, and we congratulate our readers on the almost certainty of a good season. If confirmation of this view were needed, it comes in the very encouraging number of entries in the honey classes of the later shows now being held, and those still to come. When honey is plentiful, and of excellent quality, on the show tables, it is a reliable indication of general bee-prosperity so far as the season has gone.

We have not as yet had full reports of the prospects at the moors, but there is no reason why a successful heather season should not follow the splendid growing weather lately experienced. At any rate, northern bee-keepers are very hopeful of as good a time at the heather as we have been favored with in the South from fruit and clover, and we heartily wish them full supers, and plenty of them.

Queries and Replies.

Is Pollen Stored in Drone-Combs?

Query 780.—Do bees ever store pollen in drone-combs? If not, why not?—G.

Not to our knowledge.—Dadant & Son.

They do sometimes, but not often.—J. P. H. Brown.

I think they do, though I am not sure.—J. M. Hambaugh.

I do not remember having seen pollen in drone cells.—H. D. Cutting.

I do not know; let some one speak who does.—Mrs. L. Harrison.

I have never noticed any stored in such cells, but can give no reason for it.—C. H. Dibbern.

I never thought of it before, but I do not now recollect of ever having seen any.—Eugene Secor.

Not usually. Perhaps because there are not usually such combs close beside the brood.—A. J. Cook.

Have never made any observations on this point, and fail to see a practical application for it.—G. L. Tinker.

I think they do, but I have not examined into the question so as to feel safe in a positive affirmation.—M. Mahin.

Very seldom. The cells are so large that the bees cannot very well pack it so as to make it stay.—R. L. Taylor.

Certainly not often. I do not know why, unless because they never rear drones, except when they can get pollen fresh from the fields.—C. C. Miller.

I have never known them to. As to why not? for a guess, I should say, because the main object of gathering it is to feed to the workers.—J. E. Pond.

Yes, though not as much as in worker-comb. I do not know that I can tell why, unless the size of the cells renders it harder for the bees to make it stay there.—G. M. Doolittle.

Bees follow laws peculiar to themselves. They gather pollen to feed to the young, and as the great bulk of their young is "workers" they store the pollen in worker-combs. To answer your question directly, I have not noticed pollen in drone or store-combs, but I am not sure that in all cases pollen is absent from drone-cells.—G. W. Demaree.

Very rarely. Because they do not have to, I guess. Either that, or it is none of our business. Can we get rich any faster when we find out? Perhaps because they can pack it better.—James Heddon.

Yes; but not often. Pollen is used for feeding the young, and as the workers greatly preponderate, it is probably more convenient when stored in the worker-combs. It may be that there are other reasons, but they are quite unimportant.—The Editor.

Belle P. Drury is responsible for the following bit of bee lore: "The owner placed a small box on top of an old-fashioned hive, which the bees soon filled with honey. It was twice taken off, emptied and replaced. Lifted the third time, it was found that the bees had not attached the honey to the box at any place, but had built it up in a square shape on the top of the old hive."—*Rural Canadian.*

A Swarm of bees found a home in the walls of a Churdan, Iowa, millinery shop, and a large amount of honey was recently taken out.

Convention Notices.

☞The Cortland Union Bee-Keepers' Association will hold its annual basket picnic at Little York, N. Y., on Tuesday, Aug. 25, 1891. All persons interested in bees and honey are cordially invited to attend. M. H. FAIRBANKS, Sec., Homer, N. Y.

☞The ninth annual meeting of the Susquehanna County, Bee-Keepers' Association will be held on Thursday, Sept. 3, at South Montrose, Pa.
H. M. SEELEY, Sec., Harford, Pa.

☞ A meeting of the Illinois State Bee-Keepers' Association will be held at the fair grounds of the Sangamon Fair Association, Springfield, Ills., on Tuesday, Sept. 9, 1891, at 1 p.m., at the office of the President of the Board. The object of the meeting, among other things, will be to formulate a programme for our regular meeting. It is of the utmost importance that the programme prepared at this meeting should embrace our best talent, as it will furnish the material for the Report which the State has made provision for publishing.
By order of the Executive Committee.
JAMES A. STONE, Sec., Bradfordton, Ills.

☞The Ionia Bee-Keepers' Association will hold its next meeting on Tuesday, Sept. 15, 1891, at Ionia, Mich. HARMON-SMITH, Sec., Ionia, Mich.

☞ The Southwestern Wisconsin Bee-Keepers' Association will hold its next meeting on Wednesday and Thursday, Oct. 14 and 15, 1891, at Fennimore, Grant Co., Wis.
BENJ. E. RICE, Sec., Boscobel, Wis.

Topics of Interest.

Gaining a Victory Over Robber Bees.

G. M. DOOLITTLE.

It is said that writers give the bright side of bee culture more largely than the dark, which I am free to admit, for when in a happy mood we are more fluent talkers than when sad or perplexed. Just now I am perplexed and troubled with robber bees trying to get at every exposed comb when I open a hive, and that a little of the dark side may appear, with your permission, Mr. Editor, I will tell the readers of the AMERICAN BEE JOURNAL something about how robber bees bothered me a few years ago, and how at that time I "got the beatens" of them, and how this has helped me to have the best of them ever since.

If anything about bee-keeping makes me feel out of sorts, it is to have robber bees hovering all day long about every hive in the apiary that they think there is a possible chance of forcing their way into. The year I speak of, a little honey had been coming in slowly up to about August 1, when there was an entire stoppage in the secretion of nectar, so that there was nothing for the bees to do; while every day the heat was intense, which is just the time to put all the possible vim into a robber bee. Add to this the running of a queen-rearing business, in which I am sending out from 30 to 40 queens some days, and the reader will take in the situation.

The cover could not be taken off a nucleus before there was a host of marauders ready to pile in, so that, had it not been for the bee-tent (which, by the way, is a great help to any apiarist) I could not have done anything at all, except quite early in the morning and late at night, both of which times are very unpleasant to work with bees.

The bee tent would hold the robbers at bay while the hive was being opened and closed; but when the bees, kept outside by the tent, would flock in upon the removal of the same, in would go the robbers, then a fight would ensue, which, in some instances, would have resulted in a victory for the latter, had I not promptly closed the hives of some of the weaker nuclei.

After a little experience robbers become very cunning and determined. They will hover all day at the entrance of a nucleus or weak colony, from 2 to 10 at a time, and alight down with fanning wings as a tired bee would do after having been from home for a long time, and in this way get past the weary guards. Again, when some of the guards caught a robber, other robbers would catch hold of the robber also, and hold on, pulling back till the robber got away, when they would whirl around, as if looking for another robber, and run into the hive. In this way they would wear out the guards of these weak colonies, and keep me on the jump all the while.

Talk about the pleasures of bee-keeping when a man has to go on a jump from early morning till after dark, in the scorching sun the most of the time, with the mercury up to 90° or 95° in the shade; and add this robbing perplexity, and you will have something not *always* told about in our bee periodicals.

Well, there is a pleasant part of it after all, and that is what I wanted most to tell the readers about. The bright side again, you see. What was it that could make such a time bright and pleasant? Jut this: I beat the robbers! and I have been victor ever since. Winning a battle makes days of struggle and hard toil seem pleasant. From such a struggle, with victory, a satisfaction comes that cannot be had through ease and indolence: in fact, ease and indolence, if long continued, give no satisfaction at all. In watching, I often noticed that when a robber slipped by the outside guards into a hive, it would be led out by a bee from the inside of the hive.

This set me to thinking, the result of which was the fixing of every nucleus and weak colony as follows: Heretofore I had the entrance to the hives right direct onto the combs. To accomplish what I wanted to, when I opened a nucleus, I took the frame having the most honey in it and set it clear to the opposite side of the hive from the entrance, then the frame having the next most was put close to it, and the one having the most brood in it, last; having the frame with the most brood nearest the entrance, no matter how many frames the hive contained. I now drew up the division-board and closed the hive. This left the entrance on one side or end of the hive, while the nucleus or weak colony was on the other.

If a robber slipped by the outside and inside guards it now had to travel over considerable space, all along which were scattered guards ready to receive it. If it succeeded in getting by them through stratagem, it first came to the division-board, and if it got around that, the next thing was a comb of brood better protected with bees than any other part of the hive. The result was, that although robbers still hovered around, yet not one colony when fixed in this way, has allowed a robber to obtain a load of honey, if there was sufficient bees to be called a colony or nucleus. Ever since this I have made the entrance to all weak colonies at one side of the hive, and keep the brood next the entrance, as previously spoken of, and to have a colony robbed, unless in early Spring, when there were so few bees and little brood that the bees made no effort at protecting the combs, has become a thing of the past.

Of course, if we persist in working with the bees without a tent when there is no honey in the field, and allow robbers to fill themselves with honey from the open hive, the bees may become so demoralized that all precautions will fail; but no one worthy of the name of apiarist will do such a thing. The would-be-robbers are unpleasant now, but I am master of the situation.

Borodino, N. Y.

Preserving Quality in Liquefied Honey.

PETER BOIS.

Under the ordinary plan of liquefying honey the product is sticky, somewhat like molasses, having thickened in melting. But more than this, it has lost part of that fragrant aroma and exquisite taste which it before possessed.

These important qualities can all be retained, almost, if not altogether, by a simple process; its extreme simplicity is, no doubt, one of the causes why it is not found out and used by those who have to re-liquefy honey. It consists in covering the honey about to be subject to water heat with half an inch of cold water. The crust and the whole of the acid portion, if any, on top of the granulated honey, should be removed previous to placing the cold water on. After melting there appears about the same quantity of water on top of the honey as when placed on at first.

When the honey is thoroughly melted, and has been allowed to cool down to a lukewarm condition, the water covering should be poured off by partly inverting the vessel.

It may be useful to state that the simple covering of water has no effect whatever on granulated honey that has already been melted without it.

Honey that was originally clear, and has become thick and cloudy by being melted without the covering of water, will not alter, if melted a second time with it.

Out of the several lots remelted for bottling I occasionally forgot to place the cold water covering on some, and as a result they were unfit for placing in the glass jars, for the reason previously stated. I therefore warmed them over again, previously adding the covering of water, but without effect. It was then that I seized the great importance of placing the cold water on the granulated honey previous to melting.—*British Bee Journal.*

Epilobium, or Fire-Weed.

JAMES HEDDON.

I note what Prof. Cook says regarding epilobium, on page 171, but I cannot see why it should ever be called "fire-weed." I suppose the reason for naming it fire-weed was because it grows almost exclusively on ground that had burned over the previous year. This is not at all the case with the epilobium, surely, for I find it plentiful all over Northern Michigan—up on the hills and down in the marshes and cedar swamps, where there is no evidence of fire ever having preceded it.

Gray's Botany tells us that this plant will not be found south of 43′ to 44′ north latitude, and so I have ever found it to be in this State until this year. A few weeks ago, as I was riding along the road a few miles northwest of this place, I was simply amazed to behold a group of these plants, all in bloom, a few rods from the road.

I called a halt, and picked one specimen, and, sure enough, it was the simon pure epilobium, and no mistake. A few days later I found another and much larger patch of this valuable honey-plant, about six miles northeast of our city.

Now, from whence did they come? Why did this plant lately prove false to Gray, and its old-time habits?

Do not forget that I am annually familiar with all the honey-plants, for miles in all directions, and, further, that having been so much interested in the epilobium, I would, and did surely discover its advent here. Perhaps not the first season of its existence in our county, but surely before it had been with us long.

I always think of the immortal Darwin, who said: "The more bees, the more seeds; the more seeds the more plants; the more plants the more flowers; the more flowers the more bees," etc., or words to that effect.

I believe that we may look for the advent and rapid increase of new honey-plants, in any locality where plenty of honey-bees are kept. I know that the same has proven true with the spread of that best of all our honey-plants the pleurisy.

Of course, it pays fifty-fold for the outlay of time, etc., to get a few seeds of any plant which you think may thrive in your locality, and thus give it a start, when the bees will do the rest, provided the plant has those tenacious qualities without which no honey-plant is worth fussing with for honey alone.

I began about ten years ago to scatter seeds of such honey-plants as would hold their own against poor seasons, grass and weeds, in waste places, and the result is that the pleurisy and sweet clover are the stand-bys, and from them alone we now get a yield which keeps the bees from robbing, and at the same time gradually increases our surplus work, while previously we had a perfect dearth for about two weeks between basswood and buckwheat, boneset and golden-rod, etc.

It took time, but now that I am enjoying the benefits of the trouble and forethought of years ago, I am glad and proud of what I did.

What I read in Gray's Botany, years ago, about the epilobium, made me so sure that the plant would not thrive here, that I never scattered any of the seed, although now I wish I had. But after all, it may be that I would have made as many failures as attempts and that nature had scattered the seeds one thousand times, before one catch resulted.

Again, we are not forgetful that when once started by nature we can pretty safely count on a continuation of the plant even as far south as 42′. Prof. Cook can tell us, in classical terms, all the reasons.

I shall take my horse and buggy, and gather the seeds from these two patches of the epilobium (as it continues to bloom and produce seed all through this month) and look for more plants, if it takes all my time, for with this plant, in addition to the pleurisy and sweet clover, we will enjoy one endless surplus flow, from the beginning of June to the last days of August or to September 10.

I hope Prof. Cook will give us a good article on this subject, and correct any mistakes I may have made regarding the development of honey-plants.

Dowagiac, Mich., Aug. 6, 1891.

Bee-Keeping in Australia.

HENRY TURNER.

I used to look upon bees as very tiresome, stinging little things, and have occasionally found them so since I captured a swarm passing by, two years ago last December; anyhow, I only got one sting in taking them.

Three weeks later, wanting some advice, I applied to a friend some distance away. He examined the bees and told me there was no queen amongst them, but offered to help me until such time as I got my bees in working order. He brought me a frame of brood, but no queen was reared from it, nor was a second frame of brood more successful. He then brought a third frame with a sealed queen-cell, from which a very nice queen hatched out. I paid him 15*s.* for the queen. I then paid 14*s.* for a Langstroth hive for them, but by this time our Winter was at hand, and the bees had a good supply of honey, which my friend advised me not to take away till after the Winter had passed; and not till the following August did I carry out my first removal of surplus honey, up to December I had taken about seventy pounds. On looking at the bees a fortnight later, I found one frame nearly full of royal cells, two of which were sealed. I very foolishly destroyed all but one, and that one I put into a nucleus, thinking to get another swarm; but I reckoned without my host, for they flew away, so I was left worse off than ever, as I had destroyed all the other cells.

Three days later we had a number of wet days in succession, and the moth got into my nucleus and destroyed the royal cell, and nearly everything else in it. The combs were one tangled mass of web and grubs. What few bees were left I united with the old colony.

I then procured another queen, and clipped her wings, thinking this would prevent her wandering off, but after several attempts to clear out she got into the grass, and was there destroyed by small black ants. My friend, having no more queens for sale, offered to sell me a small colony for a pound note. I accepted the offer, thinking to unite the bees, but I found that the old colony was rearing more queens, and I did not disturb them.

Things went on fairly well, though each lot took an occasional swarming fit. By this time another Winter had passed, and I still had my colonies, but both were very weak.

The Summer which is now drawing to a close, proved a fairly good one, for I have taken about seventy pounds of honey, and have increased from 2 to 5 colonies, 2 of which are strong, and the other fairly so. Then a stray swarm came past, which I secured, and I afterwards bought a beauty for 6*s.*, so that I have now 7 colonies, of which I am very proud. My daughter has been a great help to me in my bee work this year.—*Bee-Keepers' Record.*

Queensland, Australia.

Apicultural Notes from Nebraska.

J. M. YOUNG.

The dry, hot weather of the last few days is very unfavorable for the secretion of honey; but then it is good weather for growing corn, which is very late and backward in this locality.

September is fair month, and will soon be here. Every bee-keeper should see that his apiary is represented at his county or State fair. Fairs are considered one of the best advertising mediums that can be found.

The question has been asked of me several times lately, why there is no surplus honey obtained in this vicinity this year. The only reason I can assign is that the nights are too cold. Last month is said to be the coldest July for years.

Those Hoffman frames, after they are filled and all stuck together, are not so easily handled after all, but notwithstanding this trouble they suit me better than any others, and I have concluded to use nothing else hereafter.

The *American Apiculturist* for August is at hand. The subject of the Punic bee is thoroughly discussed by friend Alley, and others, from every point. A great deal is claimed for these bees, and from what is said they are far in advance of any race in existence. I think I shall let friend Alley, and others, try them a while before I invest in any of them.

I do not care to have glass in the honey cases that are used on hives for surplus honey, as it is easier for me to examine from the top of the case than at the side. After the top is removed and the enameled cloth is drawn back at one corner, a better view of the sections is obtained than from any other point of the case, or hives. I use nothing but open-top sections.

Gloves and bee-veils, to protect the hands and face, are never used in my apiary. I do not want any gloves to bother me in handling frames or bees, or veils to obstruct my vision in working with hives. I will admit that I get stung sometimes, but if plenty of smoke is used many stings can be avoided.

I seldom open a hive without using smoke, or having it near at hand, to be used if necessary. Even in taking down swarms from tall trees, I have a hook attached to my smoker, and carry it right up with me and hook it over a limb to have it ready at a moments' warning. Sometimes this is not necessary, but when a person wants smoke, he wants it bad.

Plattsmouth, Nebr.

Cause of Sound Made by Flying Bees.

PROF. LEADER.

It is an opinion generally entertained that the noise produced by insects, such as honey-bees, during their flight, arises from the vibration or rapid motion of their wings.

Such a supposition is extremely plausible at first sight. We see the animal moving through the air; we know that the wings are in a state of rapid motion; and we also know that it is natural for a body vibrating in the atmosphere to cause a sound. We put all these facts together, and we conclude that the phenomenon is explained when we attribute the sound to the rapid waving of the wings. But, like many other hypotheses which owe their origin to the evidence of the senses alone, this appears to be erroneous.

The subject has been investigated with much ingenuity, and the conclusion arrived at is very diffierent from the common belief. We shall present a brief outline of the researches. They are not only interesting in themselves, but afford a good example of the manner in which scientific investigations are pursued.

It has been found that the wings have no part in the formation of the sound, for the hum of the insect continues even when its wings are entirely cut away. There is, however, a different *pitch* of the sound, and it has been ascertained that the more of the wing there is taken away, the higher this becomes.

The sound which the insect emits is susceptible of considerable variations. It may be that it maintains an equality of pitch and strength during a uniform motion of the wings, for so in fact it appears; but every change in the velocity of the flight, every disturbance of the ordinary motion, generally causes also an alteration in the tone. An idea of the origin of the tone is, however, only to be obtained when the insect is held by the legs, and excited by pressure or other means to go through all its motions of the wing, and thus to produce a sound. It has been found in this manner that the tone of the common gadfly varied, as the effort to extricate itself was put forth with greater or less energy.

That part of the insect by which the sound alone is produced, is the breast or thorax. In two-winged insects, this consists simply of a cavity covered by thin membrane, which exhibits on its surface various elevations and depressions, but is, nevertheless, perfectly continuous. To this hollow case are attached different sets of muscles, which serve for the motion of the legs and wings, and are capable of contracting the cavity in various directions.

In this cavity of the insect's thorax there are two very small holes, which let air out or in by the following process: When the wings rise and fall, as in flying, the cavity is alternately contracted or expanded, the result of a peculiar mechanism on which the motion is dependent. Now, it is clear that the contraction must drive out a part of the air, just as a piper expels the air from the bag of his instrument by pressing his arm against it.

On the other hand, when the cavity of the insect is expanded by an opposite motion of the wing, an equal quantity of air rushes through the air-holes. There is, therefore, connected with the motion of the wings, a constant proportionally rapid and intense breathing, *and this breathing is the true cause of the sound.* It is the efflux and influx of the air which produces the buzz or hum which we hear, just as the current of air draws music from the Æolian harp, when forced at short intervals through the small holes of the sound-board, or, to take a more familiar example, by a mechanism similar to that of the mouth in whistling. The sound of the Æolian harp bears a remarkable resemblance to that of many insects.

Now, it is evident that this theory can be proved or disproved in a very satisfactory manner—namely, by closing up the air-holes of the thorax of the insect, without injuring it in any other way. This was done, and the flight of the gad-fly was found to be accompanied by no sound whatever.

It is true that the insect dies of suffocation soon after the experiment, but not directly, because there are air-holes situated lower down, in the abdomen of the animal, and through these respiration is continued for a short time. But they emit no sound during the flight of the insect, for they are then totally inactive. The insect breathes through the air-holes of the abdominal part when it sits and crawls, but through the air-holes of the thorax when on the wing. According to this view, the hum of insects is in reality a whistle.

Transferring Bees from Box-Hives.

DR. J. W. VANCE.

My friend, D. D. Daniher, has a method that he has found successful, and it is attended with very little trouble. He fills a movable-comb hive with empty combs, or frames filled with foundation, and places a board upon it with inch auger holes (four, perhaps), and moving the box-hive from its stand, places the new hive upon it and then lifts the old hive on top, over the holes, and closes the entrance to the box-hive, compelling the bees to go down through the new hive. Ere long the bees will take possession of the movable-comb apartment below.

This is an easy way to do it and not risk any stings; a method that will commend itself to the timid and inexperienced bee-keeper.

Another plan, and one chiefly adopted, is to drive out the bees by drumming and smoke, and with a chisel and hammer open one side of the box-hive and cutting out the combs fit them into the frames, fastening with small narrow sticks, tied top and bottom to the frame, which will hold the comb in place until the bees can fix everything up neat and nice; in two or three days the sticks and strings can be removed. Of course, the colony must be placed on the old stand.

If you have never done it yourself, perhaps you had better get an experienced bee-keeper to help or show you how.—*Wisconsin Farmer.*

Madison, Wis.

Clubs of 5 New Subscriptions for $4.00 to any addresses. Ten for $7.50.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Aug. 25.—Cortland Union, at Little York, N. Y.
M. H. Fairbanks, Sec., Homer, N. Y.

Sept. 3.—Susquehanna County, at So. Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

Sept. 9.—State Association, at the Fair Grounds, Springfield, Ills.
Jas. A. Stone, Sec., Bradfordton, Ills.

Sept. 15.—Ionia, at Ionia, Mich.
Harmon Smith, Sec., Ionia, Mich.

Oct. 14, 15.—S. W. Wisconsin, at Fennimore, Wis.
Benj. E. Rice, Sec., Boscobel, Wis.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

North American Bee-Keepers' Association

President—P. H. Elwood....Starkville, N. Y.
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y and Manager—T. G. Newman, Chicago.

Bee and Honey Gossip.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

But Little White Honey.

This is another poor season for bee-keepers in this section. So far, we have about one-fourth of a crop, with but little white honey. White clover blossomed profusely, but yielded but very little nectar. Prospects for a Fall crop are good. Thos. O. Hines.

Anamosa, Iowa, Aug. 8, 1891.

Golden Yellow Queens.

On page 52 of the Bee Journal, Mr. Judkins states that he has a colony of bees which cast 12 swarms in 11 days. Now, I would like to know whether they were pint or gallon swarms. I saw a bee recently that was so heavy with wax scales that it was unable to fly, and the stinger protruded all the time. I re-queened some of my colonies this year, by inserting queen-cells, after destroying the old queens, and they all did well except one colony, to which I gave the third cell before securing a queen. Two of the young queens were lost on their wedding trip. I have some queens that are a golden yellow, except a little spot of black on the lower end of the abdomen, and one queen that is entirely yellow.

Greenville, Tenn. A. C. Babb.

Bees Have Not Done Well.

I have 45 colonies of bees, but they have done very poorly so far this year.
W. H. Duncan.

Lawrence, Kan., Aug. 1, 1891.

Preventing Dampness in Bee Cellars.

Will some one of the readers of the Bee Journal inform me how to prevent dampness in a bee cellar, during the time the bees are confined therein? The cellar is 8 feet deep, with good, thick stone walls, and a cement floor. The ground around for quite a distance is perfectly level, and the soil is clay for a depth of six feet, and the remaining distance is in sand, and there is a mill race about 8 rods distant. Last Winter the cellar was so damp that the combs in the hives became somewhat mouldy, and when any of the bees died they would soon become mouldy, also, although the cellar is well ventilated. This cellar has cost its owner not far from $100, as it now is, and he does not feel like abandoning it, and building another. He, therefore, asks if there is not some way in which the evil may be remedied, without too great expense. He thinks that some of those who have had more experience than himself in such matters, can inform him how the desired end may be accomplished without much extra expense. Constant Reader.

Honey Crop a Total Failure.

There was a good honey-flow in May, and our bees swarmed excessively, some bee-keepers reporting as many as 3 or 4 swarms from one colony. With the beginning of June came cool, wet weather, and August found most of the bees in a starving condition. Not more than 25 per cent. of my bees cast swarms, and they are in fair condition. Cotton is now in bloom, and as the sun has been shining for a day or so, we hope that the worst is over. Our surplus is never much until the wild asters bloom in September, and if the weather is favorable, we may yet realize something. I see that the wide, thick, closed-end—self-spacing and almost self-acting—top-bar frame is still being discussed. I was the first to write anything like a lengthy criticism on this frame, which Friend Root published in *Gleanings*. I fully indorse what Mr. Faylor says in the BEE JOURNAL—that this craze will yet hurt some unsuspecting novices. Let us go slow, and wait until the veterans have attained some results with it; then we beginners can take hold. A. L. BEACH.

Pineville, N. C., Aug. 4, 1891.

Caused by Poor Stores.

I lost a good colony of bees last Winter with the diarrhea. Please state the cause of the disease and a remedy in the BEE JOURNAL. C. LOWER.

Decorah, Iowa.

[Bee-diarrhea is generally caused by poor stores for Winter. If you had given that colony some well-ripened honey for Winter, you might have had it yet.—ED.]

Dark Honey.

My bees are doing very well. I sowed some buckwheat, and the bees are just beginning to work on it. Honey is all dark on account of so much honey-dew.

H. MANSPERGER.

Benbow, Mo., Aug. 9, 1891.

Black, Shiny Bees.

Early honey harvest is over, and although much better than last year, it is not what we expected. I have taken off 570 pounds of extracted, and 470 pounds of comb-honey of good quality. I have 68 colonies of bees in good condition for Fall bloom, which promises fair. In regard to those black, shiny bees, the two colonies that I mentioned (page 737) were so badly effected that they dwindled down so that about July 1 I united them, after having destroyed one of the queens; but still they dwindled until they were worthless, when I destroyed the other queen, and inserted a good queen-cell. The two queens that I destroyed were both fine looking and good layers, but the bees were so badly diseased that they would die before they were old enough to gather honey and pollen. It surely is a disease of some kind, and a very destructive one, too. If Prof. Cook, or any one else, knows anything about this disease, and a remedy for it, they will confer a great favor by giving it to the readers of the BEE JOURNAL. B. W. PECK.

Richmond Center, Ohio.

Wavelets of News.

Number of Drones Required in a Hive.

One drone for each queen is all that is really needed. All others are a surplus, and only live to make the colony poor in honey. All unnecessary drone brood should be cut out, and empty drone comb kept at the sides of the hive and always away from the center, for storing honey. When too great a quantity of drones fill the hive, it should be opened and most of the drones destroyed, or a drone-trap used.—*Exchange.*

Drone Colonies of Bees.

Occasionally a colony of nearly all drones is discovered. Now let us open one of these and see what we will find. Plenty of drones, with now and then a worker. The sealed cells of workers' comb stand high above the surface, and are very much scattered. There will soon be no more drones reared, for there will be no workers to feed them. If there is a queen she has never been fertilized, and every egg produces a drone. When a colony has been queenless a long time, some of the workers aspire to motherhood and lay eggs which produce drones. These bees have been improperly called fertile workers; better say laying workers. If such a colony is left alone, the moths will have the credit of destroying it, as drones cannot long exist without workers. When I find such a colony I give the combs to a swarm or use them in nuclei.—MRS. L. HARRISON, in *Prairie Farmer.*

Practical Hints to Beginners.

The most essential and necessary thing looking toward a good yield of comb-honey is a good season, combined with having the colonies you intend to use for this purpose strong in numbers early in the season.

To have the bees strong early in the season, each colony should be known to have a good fertile queen. As the season advances, you can help them by inserting an empty frame of worker comb into the brood-nest, between the brood combs; though never more than the bees can cover well, as this will spread the brood and induce the queen to greater activity.

In spreading the brood, if too many empty combs are inserted at one time, it will sometimes weaken, aye, even destroy, a nice colony, if cold, rough weather sets in. Bees then concentrate, in order to keep up the necessary animal heat, and consequently the most outside brood will chill. Feeding them, although they have plenty of honey in the hive, will stimulate them much, so that they can stand the cold snaps better, which we often have in this climate duting the fore part of the season.

The best time to increase bees is when there is an abundant supply of natural forage, and colonies are very strong. Under any other circumstances it is dangerous. Sometimes it will work to take a comb of bees and brood from a hive about the first of June and let them work up to a colony by winter; but it is unsafe. Again, it will sometimes work very well to divide after the main honey crop is over, if they have honey enough for both colonies. However, June is the best time for increase, and by making each part strong, we run no risk of failure. —G. M. Doolittle, in *Rural Home.*

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Bee-Hives—Historic.

The Langstroth hive was invented in 1861 by America's great bee-keeper, a graduate of Yale and a very eloquent and learned divine—the Rev. L. L. Langstroth, now of Dayton, Ohio.

Nearly all American bee-keepers use this hive. In it frames, containing the honey comb and honey, hang on rabbets at the top of the end-board, so that, if accurately built, the combs may be easily and quickly lifted from the hive.

All hives with these hanging frames, no matter what the size and form of the frames, are Langstroth hives. Such hives are non-patentable, so the hives used by the most and best bee-keepers of America are free to all.

The Golden bee-hive, sold now in the South, is really a Langstroth. To sell "rights," as some men are doing, is rank imposture, and should be denounced.

The Dzierzon hive, invented by a very able bee-keeper of Germany, a Catholic priest, simply has bars at the top. This is a bar hive, and not a movable frame hive. Here the combs are fastened to the side of the hive and must be cut loose to be removed. I can hardly see how one who had ever seen a movable frame hive could possibly think for a moment of using a bar hive. Yet Dzierzon always clung to this hive.

The Huber hive consisted of frames of comb, the ends of which formed two sides of the hive. These opened like the leaves or covers of a book, and so permitted the great Huber to make his renowned and immortal discoveries.

The Quinby hive, now used by the Hetherington Bros., with their thousands of colonies, by Mr. Elwood and others, is a modified Huber hive. So is the shallow Bingham hive, which Mr. Bingham, one of our best bee-keepers, thinks the best in existence.

The new Heddon hive, perhaps the best for the expert bee-keeper, is also a modified Huber. Here the frames holding the comb are set in a close case and firmly held by thumbscrews.

To those who contemplate beginning bee-keeping I unhesitatingly recommend the Langstroth hive. If not the best, it is very excellent and has stood the test of long years of experience.—Prof. A. J. Cook, in the New York *Tribune.*

◆

Bees Working on Red Clover.

We have noticed bees working on red clover this season more than usual, possibly because there is so much nectar in it as to be easily reached by the bees, for the heads are large and rank. Heretofore we have noticed them working on it most when dwarfed by dry weather.—*Western Bee-Keeper.*

◆

Daily Average of Honey Gathered.

George W. Swink, a gentleman from the East, has located near Rocky Ford, Colo., and established an apiary, which he is running on business principles. He takes the weight of each hive at the beginning of the season, and keeps a record of the work done by each colony. The record of one colony from June 23 to July 6, this season, is interesting. The weight of the hive on the first-named date was 59½ pounds, including the honey in it. The daily yield of honey covering the period mentioned is given in the table below:

DATE.		HIVE WEIGHT.	HONEY.
June	24	68	8½
"	25	76¼	8¼
"	26	81½	5¼
"	27	89¼	7¾
"	28	96¼	7
"	29	102¼	10¼
"	30	113	6½
July	1	119	6
"	2	126¼	7¼
"	3	132	5¾
"	4	137¾	5¾
"	5	143½	5¾
"	6	148½	5

Thirteen days, total honey stored, 89

This is an average of 6.84 pounds of honey a day, to the hive. On June 30 the bees gathered 10½ pounds of nectar.

Another hive averaged 5.31 pounds, daily, for the same period. The Arkansas Valley, particularly that portion in Otero County, is becoming a great bee section, and has no superior as a honey field.—*Colorado Farmer.*

◆

How to Tell When Bees will Swarm.

In passing through the yard the other day, one of the students asked how we could tell when a colony was going to swarm, and we remarked that it was a very difficult matter in some instances, while very easy in others.

On looking round we pointed over to a colony, perhaps 80 feet away, and said, "There is one that will swarm very soon." "How do you know?" was the reply; and we remarked: "Do you not see those two or three rows above the entrance, running up the hive, apparently biting with their mandibles, and backing down again? They move backward and forward, continually working their feet and their mandibles, or holding their heads down closely to the hive, and we have noticed them doing this same thing on the entrance board. One of our students once named it the bee-dance, or balancing to their partners."

While we were describing this to him, he said it was very plain if they would always do that, and there was no trouble in telling when to swarm. "Ah," we said, "you would have to watch them every day, because after they commence to do that, they are almost sure to swarm the same day, and will very seldom, if weather is favorable, wait till the next, and if they commence doing it in the morning before ten o'clock, you may usually look for a swarm before three.

"Well," he said, "that movement is distinct, and we shall never forget it," for while standing there the swarm issued. These bees that were doing the moving, back-and-forth, apparently did not know what was being done inside till the swarm had about one-third issued, then they turned round, as it were, and crawled back among the rest, and flew with them.

They appeared not to notice the commotion in the inside of the hive, and though they were going through with that peculiar performance, seemed to stop for half a minute, and then rushed pell-mell from the entrance.

In passing through the yard, this peculiarity should be watched, and you can often pick out the colonies just about to swarm, and by having everything in readiness, catch the queen.—*Canadian Bee Journal.*

Bees and Fruit.

Many farmers who grow a considerable quantity of fruit on their place, object to keeping bees because they feel convinced that the bees injure their fruit. I, personally, doubt very much if a bee ever injured fruit. They certainly suck the nectar from grapes, cherries, and other fruits, but not until they have already been punctured by birds or other insects. Punctured fruits will decay anyhow, and can never be gathered in a sound, wholesome condition.

The bees have been experimented with, time and again, and in all cases it was found that they never disturbed the fruit until the outside skin was first broken by other creatures. Fruit kept in the greenhouse, where the bees were allowed to fly around is never touched by them, but as soon as a few of them were broken open the bees swarmed around the spot. Orioles, robins, catbirds and other birds are generally the marauders, and the bees simply follow in their footsteps to prevent the nectar from going to waste.
—Annie C. Webster, in *American Cultivator.*

◆

A Swarm Inside a Hobby-Horse.

It was at a pleasure resort where there were all sorts of amusements—swings, roundabouts, etc.

After the season is over the roundabouts are taken down and packed in an open shed. The wooden horses are hollow inside. The iron rods which are suspended from the roof, pass through the middle of the horses and are secured by a nut underneath. For convenience these rods are taken out when the horses are packed away, thus leaving an entrance to the space inside the horse. It was through this hole that the bees found their way in.

When the horses were wanted for use they were taken out of the shed and put together on the roundabouts. The horse with the bees in it was one of the center ones, and when the iron rod was put in it closed the entrance and the bees were imprisoned inside the horse. After a day or two they found a way out. The wooden plug which fastens the horse's tail in did not fit the hole tight, and by the side of this the bees made a new entrance. Meanwhile the horses were being used; but it was soon too warm a quarter for the visitors.

The men in charge of the horses stopped up the holes, but the bees managed to get through again and soon cleared the course, driving the visitors to a safe distance which was a loss to the owner of the roundabout, so he sent word to a neighboring bee-keeper to come and destroy them. In lieu of that he took a hive, smoker and tools, and proceeded to remove them. First taking the horse off the iron rod and then his tail out, which left a hole about an inch in diameter, over which he placed a hive; then plugging up the hole in his back injected smoke into the hole on the under side and thus drove the bees out into the hive, which took about fifteen minutes. Then he made the tail-hole large enough to put one's arm through, and took out the comb. The inside of the horse was found to be quite full, though in shapeless mass caused by the horse going round. The bees did well afterward, apparently none the worse for having lived in a "horse."—*British Bee Journal.*

Yellow (?) Carniolans.

Some of the discussion upon the so-called "yellow Carniolans" reminds one quite forcibly of the bee journalism that has come and gone.

There is no doubt that yellow bees can be found in Carniola, but it has been explained how they came there, that they have intermixed with the yellow bees of Italy. The point is right here. Carniolans are a dark variety while Italians are yellow. To secure bees from just inside the border of Italy, bees that had received a dash of dark blood from an adjoining country, then breed out the yellow blood and sell the result as *black* Italians, would be exactly in line with what is being done with the Carniolans. That the bees sold as "yellow Carniolans" are good bees no one has expressed a doubt, that their immediate ancestors came to this country from Carniola may be equally true, but to call them typical Carniolans would be as absurd as to call an octoroon a typical African.—*Review.*

Detection of Paraffine in Beeswax.

A few grammes of the substance in fine air-dried shavings are gradually heated in a small porcelain capsule until fumes begin to rise. A half-liter wide-mouthed bottle is then inverted upon the capsule, and when filled with white vapors is closed and set aside until the fumes have condensed upon its walls. The sublimate is then dissolved in 3 c. c. of chloroform, the chloroform evaporated in a test tube, and the residue boiled with 4 c. c. of soda solution. If paraffine was present, it will, after cooling, be found floating on the clear solution. A drop of the chloroform solution may also be evaporated on a slip of glass and examined microscopically.

The fumes from pure beeswax are not so white as from paraffine, and are only obtained at a higher temperature (300°—320°). The sublimate gives a colored solution with chloroform and a colored and turbid solution with soda. The residue from the chloroform solution is a dull film; paraffine, on the contrary, gives separate grains in a clear field.—*Scientific American.*

Honey-Dew Plentiful.

While walking down street the other morning, we noticed damp looking spots on the sidewalk, and remarked at the time that it looked like the droppings of the *aphide*, or plant louse. The spots were under a thrifty, second-growth basswood tree, planted about eight years ago, the trunk eight or ten inches in diameter, with a large fine top.

We looked up among the leaves for some time to find the insects that were discharging the sweet substance, and at last, on the under side of a limb, we noticed a large number of insects clustered together, and covering the limb for a foot or more. They were so near the color of the basswood bark that it was difficult to see them. Taking a sheet of paper out of our pocket and holding it underneath the limb, we had before long a number of small drops on the paper. It was easy to see where the sweet substance was coming from, that was not only attracting the flies in large numbers, but also bees and wasps.

After examining this tree, we went to another, some distance away, and there found that more of the same liquid had dropped on the sidewalk in various places. The grass under the tree was quite sticky, and flies seemed to be doing a land office business, around these particular spots.

We have not had time to examine the trees in the woods, but feel satisfied that honey-dew is likely to be quite plentiful; and right here, let us say, in every locality as soon as the basswood flow is over, if you are extracting, take out all the honey that you intend to remove before it gets mixed with honey-dew.

In localities where Canadian thistles abound, no doubt large yields will be obtained from them, and the bees will be little inclined to work on honey-dew so long as the honey harvest is good from thistles or other flowers; but be exceedingly careful not to allow any honey-dew to get mixed with the crop that you expect to sell, as it will very much injure the honey trade.

A gentleman who was watching our experiment asked why there were no blossoms on the tree. We could not tell him but simply knew that our second-growth trees have had no bloom on this year, or very little. We were wondering whether every basswood tree secreted a certain amount of sweet every year, whether the bloom was there or not.

This gentleman remarked that he thought, as there was no bloom, that these insects were sent to suck the honey out through the limbs of the trees, and discharge it where the bees could get it; but if that was the kind of honey we had to have for basswood honey in future, we would step down and out of that part of the business.—*Canadian Bee Journal.*

Benefit of a Cold Winter.

Such a Spring drought as we have had this year in many parts of Canada is unprecedented in the memory of "the oldest inhabitant." We usually have a dry spell in midsummer, but are seldom, in seed time, without sufficient rain to give the grain and grass a good start. But the present season has been remarkable in many localities for a long-continued Spring drought. In some parts of the country there was hardly a drop of rain from the middle of April to the middle of June, and this following a comparatively mild Winter, during which frost did not penetrate the soil to any great depth, made the long "dry spell" the more trying. When the frost goes to a considerable depth into the ground, it takes longer to thaw out, and there is a retention of moisture far on into the Spring. It is this which makes the climate of Manitoba and the Northwest favorable to the wheat crop. The frozen soil thaws very gradually, and is a reservoir of moisture for the growing crop, which it supplies with water by capillary attraction.

In the Northwest there are no Spring rains, and the water supply rises from the depths of the earth, instead of falling from the regions of the sky. The writer has seen excavations in Winnipeg during midsummer, out of which big chunks of frozen earth were taken to make room for the foundations of buildings. But in "old Canada," as it is sometimes called, frost is rarely found in the ground after the first of May, and this compensating advantage of a severe Winter is not present to mitigate the effects of such a drought as we have had the present year.—*Rural Canadian.*

Honey Vinegar from Cappings.

Drain all the honey that can be got from the cappings, which are then covered for an hour or two with water. The cappings from 1,000 pounds of honey will sweeten enough water for 45 gallons of vinegar. The water is drained into an open barrel which is kept covered with a cloth. The scum is removed as it rises. In about a year the change to vinegar will be completed.—*Exchange.*

Keep Honey-Dew for Spring Feeding.

A bee-keeper who lives in the woods of the Illinois River bottoms, called lately to inquire what he had better do with the honey-dew that his bees had stored. He said the brood-nests were filled with it, so that the queens could not lay. He had extracted from surplus cases about 1,500 pounds. It was dark stuff gathered from the secretions of an insect, living upon the oaks and hickories. Such a product may not be good food for bees to Winter upon, but for Spring feeding, would promote brood-rearing, and do no harm.—MRS. L. HARRISON, in the *Prairie Farmer.*

Removal. — Circumstances have made it to our advantage to remove to more commodious quarters, and we may hereafter be found at 199, 201 and 203 East Randolph Street—two blocks north and one block east of our former location. Previous to removal we occupied the fifth floor of a building, but we now occupy the *third* floor of a building near the corner of Fifth Avenue and Randolph Street. Our friends are always welcome.

When Writing a letter be sure to sign it. Too often we get letters with the name of the post-office, but no County or State. One such came recently, and we looked into the Postal Guide and found there were places by that name in 13 States. That order for goods will have to wait until another letter comes to give the proper address. Be sure to stamp your letter, or it may go to the dead letter office.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ADVERTISING RATES.

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On larger Advertisements, discounts will be stated, upon application.

Advertisements intended for next week must reach this office by Saturday of this week.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to pay for another year.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. It costs:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal......	$1 00....	
and Gleanings in Bee-Culture....	2 00....	1 75
Bee-Keepers' Guide....	1 50....	1 40
Bee-Keepers' Review........	2 00....	1 75
The Apiculturist............	1 75....	1 65
Canadian Bee Journal.......	1 75 ...	1 65
American Bee-Keeper.... ..	1 50....	1 40
The 7 above-named papers	6 00....	5 00
and Langstroth Revised (Dadant)	3 00....	2 75
Cook's Manual (1887 edition)	2 25.. .	2 00
Quinby's New Bee-Keeping.	2 50....	2 25
Doolittle on Queen-Rearing.	2 00....	1 75
Bees and Honey (Newman)..	2 00....	1 75
Binder for Am. Bee Journal.	1 60....	1 50
Dzierzon's Bee-Book (cloth).	3 00....	2 00
Root's A B C of Bee-Culture	2 25....	2 10
Farmer's Account Book.....	4 00....	2 20
Western World Guide	1 50....	1 30
Heddon's book, "Success,"..	1 50....	1 40
A Year Among the Bees	1 50....	1 35
Convention Hand-Book......	1 50. ..	1 30
Weekly Inter-Ocean.........	2 00....	1 75
Toronto Globe (weekly).	2 00....	1 70
History of National Society.	1 50....	1 25
American Poultry Journal..	2 25....	1 50
The Lever (Temperance)	2 00....	1 75
Orange Judd Farmer........	2 00 ...	1 75
Farm, Field and Stockman..	2 00....	1 75
Prairie Farmer.............	2 00....	1 75
Illustrated Home Journal ..	1 50....	1 35
American Garden	2 50....	2 00
Rural New Yorker	2 50....	2 00
Nebraska Bee-Keeper.......	1 50....	1 35

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

Our Club Rates are: $1.90 for two copies (to the same or different post-offices); and for THREE or more copies, 90 cents each.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVIII. Aug. 27, 1891. No. 9.

Editorial Buzzings.

Mr. W. B. McCormick, an apiarist, Uniontown, Pa., and correspondent of the Bee Journal, gave us a call last week.

Connecticut's State Association has affiliated with the North American Bee-Keepers' Association. Mrs. W. E. Riley, of Waterbury, is the Secretary.

Mr. R. F. Holtermann, of Brantford, Ontario, will attend the Toronto Exhibition, as a representative of the American Bee Journal, and make a report for its pages in due time.

An Apicultural Congress, organized by the French Society of Apiculture and Insectology, will be held at Paris, during the Exposition, which will be open from August 23 to September 27, 1891, in the Tuileries.

The Punic virgin queens which we received from England, were noticed on page 167. As there stated, one was dead when received. The other queen was safely introduced, but disappeared before laying—probably lost on her "wedding trip." Thus endeth the first experiment.

Dr. C. C. Miller writes to us that he also received two from Mr. John Hewitt, for experiment. Of these, one was lost on her marriage-flight, but the other is now laying. One out or 4 is a poor percentage.

Cool Beeswax gradually, and then the impurities will settle to the bottom, and may be scraped off the bottom of the cake, when it is taken from the pan.

A Patent was issued on August 11, 1891, to a man at Addison, N. Y., on a bee-hive with not one new feature in it. It has, however, the usual number of glass and wood doors, slides, drawers, hooks and eyes. It is nothing but robbery for the Patent Office to issue such useless patents. With Grubb's this is two that have been received within a month. We pity the poor "inventors." They are cruelly deceived!

During the Chicago Exposition the Northwestern Bee-Keepers' Association meets. The authorities sometime since ordered the demolition of the building, as it stands on land belonging to the city. Negotiations have lately been going on to allow the building to stand until next Winter, so that the Exposition may be held in it next month, and the Fat Stock Show from November 11 to 21. This will, no doubt, be the result, though at this writing it cannot be positively stated. If the Northwestern Convention cannot be held during the Exposition for lack of time to get notices out, it can be held during the Fat Stock Show, when reduced rates will prevail on all the railroads.

The Doolittle queen cups are finding advocates and admirers every day. The following is from the last issue of *Gleanings*, and gives a utilitarian reason for adopting that plan of queen-rearing:

> Hip, hip, hurrah! We are having success with the Doolittle queen-cell cups. Nine-tenths of the artificial cups are now accepted by the bees, and built out into large handsone cells. Without this plan we should be short, at this time of year, of cells for queen-rearing.
>
> If everybody has as good success as we are now having, it is going to be a great boon to bee-keepers, from the fact that we can breed all, or almost all, queens from a choice mother, the best queen in the whole apiary, instead of a dozen or two, as we were obliged to do by the old methods.

Doolittle's book is one of the most readable books of this age, and every bee-keeper should have it. It can be obtained as a premium by sending us two new subscribers. That is worth taking a little trouble to accomplish.

A New Hive has come to our Museum, from Thos. O. Hines, Anamosa, Iowa, for the examination of visitors. It is a new departure; the body has six sides, and the frames are odd shaped enough to suit the most fantastical.

The Honey Crop of Wisconsin, seems to boom pretty well. Last week we stated, on page 236, that Mr. E. France had a crop of 30,000 pounds. Now, Dr. J. W. Vance, remarks thus in the *Wisconsin Farmer*, about the basswood crop of honey:

> Mr. D. D. Daniher reported that he had extracted from 26 colonies, belonging to Mr. Atwood, of Middleton, 1,600 pounds, almost all of basswood. From what we have learned we incline to think we have had a bountiful crop this year.
>
> Rev. T. E. Turner, of Sussex, Wis., informed me that he would have about 4,000 pounds of comb and about 1,000 pounds of extracted-honey.
>
> Mr. Turner's bees are chiefly Carniolans. He is well pleased with them. Their merits are gentleness, and activity; the queens are very prolific; they are hardy and winter well. If they get any other blood and become hybridized, look out for them. They will be as cross as any other hybrids.

Bee Paralysis is the name hereafter to be used instead of "Palsy," "shaking disease," "trembling disease," "nameless disease," and the like. We fully agree with friend Root, in the following paragraph from *Gleanings:*

> Dr. Miller proposes, or, rather, advises, the expediency of another name for the "nameless bee disease." It is a shame that this misnomer has gained all but universal acceptance on this side of the Atlantic, for designating a peculiar malady that affects bees. Perhaps we are responsible in a great measure for it. At any rate, with the concurrence and agreement of the editors of other bee-periodicals, we propose to accept, as a better name, "bee paralysis" (*Bacillus depilis*). This is the name that is in use in England, we believe. By Cheshire it is called *Bacillus Gaytoni*. The termination *depilis* is descriptive, while *Gaytoni* is derived from a name—a Miss Gayton who called Cheshire's attention to it. We like *depilis* better, because it means *without hair* or *fuzz*, and this exactly describes bees afflicted with *Bacillus depilis*

It is quite appropriate that as friend Root was responsible for the "nameless" cognomen, he should atone for it by giving it a name that is reasonable and proper.

The Honey Season in Canada is thus described in the Montreal *Witness*, of August 19, 1891:

> Our brief honey season may be said to have departed. The white clover and basswood yields have come and gone: the Canada thistle is still in bloom, viper's bugloss is holding out wonderfully, and the golden-rod is just coming into flower. These give the bees partial employment, and help to quiet them down after the rush of their harvest time.
>
> In this locality, we have not had even an average honey season. The dry, hot weather in Spring and early Summer made the flowers few and small. White clover was well nigh a failure, and the scarce heads of bloom seemed to contain very little nectar. But few stores were gathered from the basswood—it seemed

to dry up very quickly. When the rain came, there seemed to be a second crop of white clover, which helped to make up for the failure of the first. Most of the surplus is in the form of extracted-honey, and it has been more than usually difficult to get the bees to work in the sections.

◆

Mr. A. I. Root seems to be "enjoying poor health" this Summer. We have often laughed over the queer expression, sometimes heard, that such a person "enjoys poor health;" but here is a genuine case of enjoyment. Mr. Root even says that he rejoices in having the *grippe*, because it gives him a chance to doctor it without medicine. He puts it in this way:

> I do not see but I shall have a new chapter in this matter. And if the grip that I have been having for the last two weeks is going to help me in studying up appliances whereby drugs and medicines may be dispensed with, I do not know but I rather (in one sense) rejoice in having the grip. After I had had it for three or four days, I consulted one of the oldest and best physicians in Medina. I told him that I found it necessary to wear an overcoat and fur cap, even during August days, when the thermometer registered 85 in the shade. He asked me just one question: "Do you find that you are unusually sensitive to any sort of draft, or chilly wind?"
>
> "Well, I should think I *am* sensitive to drafts and chilly winds, Doctor, especially if the wind happens to be in the north. Why, with more than my Winter's clothing, as soon as a breeze starts up I involuntarily get behind the barn-door, or into some corner, before I attempt to even direct business."
>
> He declared it was "grip" sure; and after some more conversation he laughingly told me that he guessed I did not need any advice—that all I needed to do was to keep up the temperature by Winter clothing, and to be *sure* that I did not get chilly. He suggested that quinine might *help* to keep up the circulation; but when I told him that I rather preferred overcoats to quinine, if it would do just as well, he said, "All right, go ahead with the overcoat."
>
> Now here is the result. Just as long as I keep warm enough to perspire sufficiently to keep my under-clothing a little damp, I feel pretty well. At night I keep bundled up in much the same way; but if I attempt to leave off my wraps, and my flesh gets dry, chills commence, and grip pains and something between neuralgia and pleurisy comes streaking along.
>
> Very likely different individuals are differently affected; but, my friend, just try my plan of doctoring the grip without *medicine*. And, by the way, there are quite a few ailments along this line that yield quickly to bundling up until you perspire freely. There are some peculiarities of the treatment that I rather enjoy. One is, that I can drink all the cold water I please all day long, without any bad effect at all. It passes off with the prespiration of the body; my appetite is also fair, and I can eat almost anything. The most inconvenient part of it is having people stare at me, wondering whether I am a crank or lunatic, with overcoat and fun cap, in August.

◆

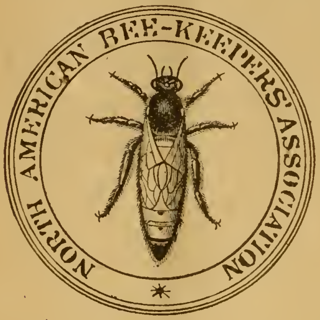
Horse, Cattle, Sheep and Swine Doctor.—This is a new book, containing, in four parts, clear and concise descriptions of the diseases of the respective animals, with the exact doses of medicine for each, by William H. Clarke. Price, $1. M. T. Richardson, Publisher, New York.

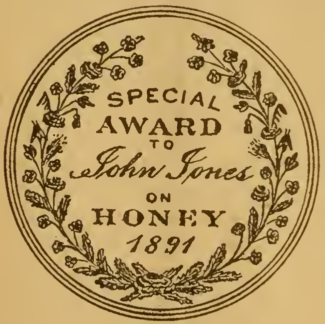
A book on diseases of domestic animals, which should present a description of each disease, and name the proper medicines for treatment in such condensed form as to be within the means of everybody, has long been recognized as a desideratum. The work before us appears to cover the ground completely. The information is arranged so as to be easily accessible—an important consideration. Each disease is first described, then follows the symptoms by which it may be recognized, and lastly is given the proper remedies. The different medicines employed in all diseases are described and the doses required are given. The book is copiously illustrated, including engravings showing the shapes of horses' teeth at different ages. An elaborate index is a valuable feature.

◆

☞ The sewing machine I got of you still gives excellent satisfaction—W. J PATTERSON, Sullivan, Ills.

Honey Exhibts should now be more magnificent than ever. The new Honey Medals are now nearly ready for delivery, and two will be sent to each affiliated society, by Secretary Dadant, at the earliest possible moment. They are furnished without cost to the local societies affiliated to the North American Bee-Keepers' Association, and will be awarded by the local officers, one for the best exhibit of comb-honey, and the other for the best exhibit of extracted-honey. Now for good-natured rivalry! Let the best win!





The Iowa State Convention is to be held next week. This is the "send off" which the Winnebago *Summit*, published at the home of President Secor, gives it:

> We notice that the programme is out for the State Bee-Keepers' meeting at Des Moines, during the State Fair, September 1 and 2.
>
> The bee is said to be a "hummer," and we judge from what we know of this society under its present management, that its members are catching the infection.
>
> It is not a good thing to have a "bee in your bonnet," nor to fool with her "business end," but a live society is sure to buzz with business; or, in other words, to make business "hum."
>
> The State Bee-Keepers' Society is making a "bee line" toward success. It will get there. Its present head is a Forest City man—Eugene Secor. Ask him for a programme.

A Rank Decision by a Justice of the Peace is thus recorded and commented upon by Mr. W. H. Duncan, of Lawrence, Kansas, in a letter to the BEE JOURNAL, dated July 31, 1891:

> A novel case, that will probably be of interest to your readers, was tried in this city recently, which shows that you must let a "bee" be or he won't let you "be." The facts of the case, as elicited at the trial are as follows: About three weeks ago John Wey, an employee of Wm. Hughs, a prominent farmer of the Kaw Bottoms, was sent up a tree to saw off a limb, to which was attached a good sized colony of very irascible bees. Mr. Wey stated under oath that no protection whatever was furnished him by Mr. Hughs, so that the majority of the vulnerable parts of his body were assailable by the insects. He prayed for $300 damages, under an old and obsolete law, which says that "when a servant engages in a hazardous undertaking, he must be duly warned and protected by his employer." Mr. Hughs wore a mask or veil, but failed to give his man one, hence, the Justice in the case found for the plaintiff $50 damages. The testimony in the case was very amusing to the spectators and the decision is considered somewhat rank.—W. H. DUNCAN.

A swarm of bees are not usually apt to sting much; being filled with honey they are considered amiable. In such a "case" as the above there must be other causes for a quarrel, and this is but the "excuse" for a fight. There could be no justice in it, except the person who tried the case.

☞According to Mrs. Ewing, of culinary fame, lemonade is the proper drink for hot weather, being both cooling and wholesome.

Worcester, Mo., is the residence of Byron Iiams. The *Herald* (a local paper) thus mentions him and his bee business:

> Then Byron Iiams, the bee man, is a great benefit to the community. His immense colonies of bees convert the beautiful flowers into honey, and fill his hives with choice honey, which he has no trouble in converting into ready cash.
>
> But hark! the voice of a woman is wafted upon the evening breeze, and we hear that supper is waiting. We seat ourself at a table presided over by a beautiful Audrain County lady, who made the nice, white biscuit, the product of Audrain County wheat, ground in an Audrain County mill; and as the flaky, white biscuit fall apart, we spread delicious yellow butter, made by an Audrain County lady, from the milk of an Audrain County cow, and over this spread beautiful clear honey, gathered by Audrain County bees, and then finish our supper with a lucious peach pie, made with Audrain peaches.

◆

The Glucose Trust or combine has been reorganized. It will be remembered that about a year ago this gigantic monopoly fell to pieces of its own weight, and from the effects of anti-trust legislation. It is stated that a pool has now been formed with the immense capitalization of $15,000,000. A daily paper says:

> There seems to be every indication that the trust will be incorporated under English law in London, and that the business of the concern will be conducted on the same general line as is the business of the great English syndicates which have invested so heavily in American industries of late years.
>
> It is absolutely denied that English capital has been employed in the deal, but the probability that the trust will be incorporated in England leads to the suspicion that English capital is being invested.
>
> It will be remembered that the old glucose trust was formed by each company placing its plant in as a portion of the capital stock. This was an unsatisfactory arrangement. Without the hostile legislation the old pool would have gone to pieces.
>
> There were quarrels and dissatisfaction among its members, which would have ended in its dissolution even if new laws had not interfered with its existence.
>
> The plans under which the new trust is formed are such that complications of the kind that brought about the dissolution of the former pool will not exist, and if the new trust is as fortunate as the whisky combine, all will be smooth sailing.

We cannot understand what possible plans the new trust can have formed to protect it against the effects of anti-trust legislation. If the trust comes within the meaning of the anti-trust law, it must go.

We cannot bring ourselves to believe that money used as a "plan" to prevent the effects of anti-trust legislation, will, in this case, bring longer life to the new glucose trust than it had a year ago.

The farmers of the country have it in their power to hold such iniquitous monopolies in check, and are determined to do so. The glucose trust is a parasite that must be speedily made to loose its blood suckers from the body politic.—*Farmers' Review.*

◆

The Fair should occupy your thoughts long before the time comes to make an exhibit. Think of *what* you can exhibit, of *how* you can exhibit it to the best advantage, and of how to exhibit it so that it will be attractive.

Please also to think about the BEE JOURNAL. Talk about it to those bee-keepers you meet at the Fair. Send for a few sample copies, and a colored Poster, and put them where they can be seen. This will help your exhibit, and will help us as well.

◆

When Transporting Bees by wagon or otherwise, it is absolutely necessary that they be secured so nicely that not a single bee can get out, and at the same time give them plenty of air. Wire screens over the entrances should be used.—*Exchange.*

◆

Clubs of 5 New Subscriptions for $4.00 to any addresses. Ten for $7.50.

Shipping Bees.—Questions are continually coming in about how to prepare bees for transportation. Indeed, there are several queries about it in this issue of the Bee Journal. Mr. D. A. Jones has had much experience in that line, and we here reproduce from the *Canadian Bee Journal* an article from him on the subject, which will be interesting to those who contemplate transporting bees by rail:

We have frequently been asked the question, How to Ship Bees? We have just received a few colonies from a friend, who is one of our best bee-keepers. They were all strong colonies and very full of brood, and just as soon as they arrived, we sent for them from the Station, and as our teamster drove into the yard, we remarked that there would be plenty of dead bees if the colonies were strong when shipped. We put them down and got the entrance opened, and found three of them clogged with dead bees; in fact out of five colonies all the old bees were dead in four hives. We think we are safe in saying that there were dead bees enough to make more than two colonies out of the five. The bees had died for want of air.

They were packed as follows: Over the entrance there were screens, and on the top of the frames were cross sticks about an inch high, with thin cotton spread over them. Had the colonies been weak they would have come through in that condition all right, or had the weather been cold, it would have amounted to the same thing. As it was very warm, however, the bees left the brood and crowded to the top of the hive—the entrance being clogged with dead bees, they soon stopped all circulation of air and consequently a great many smothered.

In order to ship bees successfully they must be prevented from stopping the free circulation of air. We question very much, however, whether there could be enough ventilation given at the bottom of the hive. It only takes a few bees to clog the entrance, and then the rest crowd up between the frames to the top, and the excitement resulting therefrom causes an unusual amount of heat. The bees will then pack themselves tightly together on the top, and in between the frames, which prevents the heat from escaping, and shuts off air.

This causes a great deal of prespiration or moisture to be given off by the bees, which makes them damp. We have seen colonies which had every comb packed solidly with bees on top of the frames a half an inch or more deep, and half way down between the frames. In lifting the combs apart, one would almost imagine that these bees had been drowned, so wet and closely packed were they. Now, how can we prevent this?

Well, we will tell you what we have done and how we do it. It will never do to ship bees, when they are strong, in warm weather, unless there is plenty of room given on top of the frames. We think it better to give them too much than too little ventilation. We find that the bees will always stay on the brood during cold weather and keep it covered and warm, but if it should turn hot, they then try to get above the brood instead of below it, and for this purpose we usually put a rim from four to six inches high, on top of the hive, allowing the bees to cluster on the wire cloth that covers it, leaving the top open—if the colony is very strong. Should the weather become cold, they will leave this cluster on top of the frames and go right down and take care of the brood, so there is less danger in giving too much than too little ventilation. We do not think there is any more risk, or perhaps not as much, in shipping bees at the height of the swarming season, if proper precautions are taken to give them plenty of clustering room above the frames. We have sometimes shipped them so strong that we have had to put a second story on top. We seldom had a loss of bees when shipped in this way. Of course, if the combs are new and not well attached to the sides of the frames, or if too heavily filled with honey, there is danger of them breaking down, but we usually select combs attached all around, or as strongly attached to the frames as possible. Old combs are better than new ones to ship bees in.—*Canadian Bee Journal.*

* * *

The Springfield, Ills., Exposition opens on Sept. 7, and closes on the 11th. Over $100 are offered in premiums on bees and honey. Mr. James A. Stone is the Superintendent. Special premiums, in addition to the above, are offered by the Capital Bee-Keepers' Association, James E. Hemmick, of Des Moines, and the American Bee Journal, of Chicago. Premium lists can be obtained of Charles F. Mills, Secretary, Springfield, Ill.

Down Among the People.

The parish priest
Of Austerlitz
Climbed up in a high church steeple
To be nearer God,
So that he might hand
His word down to his people.

And in sermon script
He daily wrote
What he thought was sent from heaven;
And he dropt this down
On his people's heads
Two times one day in seven.

In his rage God said,
"Come down and die;"
And he cried out from the steeple,
"Where art thou, Lord?"
And the Lord replied,
"Down here among my people."
—Pittsburg Dispatch.

Queries and Replies.

Moving Bees by Railroad.

Query 781.—1. I have 120 colonies of bees to ship 130 miles by railroad; can I move them best in the Fall or Spring? 2. How shall I prepare them for shipment?—D. P. N.

1. I should prefer to ship bees in the Spring, as the hives would be lighter, though it is not important.—A. J. Cook.

1. I should prefer Spring. 2. The answer would be rather long for this department. A book containing instruction can be had at the office of the Bee Journal.—C. C. Miller.

1. You *can* move them in the Fall before very cold weather, but I should prefer to wait till about April 15, as the combs are then light and the danger is much less.—C. H. Dibbern.

1. Spring would be the best time, in my judgment. 2. I have had very little experience in shipping bees. The advice of those who practice it will probably be worth more than mine.—Eugene Secor.

1. Spring would be better, for the comb would be less liable to break on account of weight of stores. 2. Too long for a full reply here. In short, make frames secure and give abundant ventilation.—G. M. Doolittle.

1. In the Spring. 2. If moved early —before there is much brood, and while the weather is cool—it is a simple matter. Fasten the frames, if they are not already fixed; fasten on the cover and bottom-boards, and cover the full-sized entrance with wire-cloth. Later, wire-cloth should also be used in place of the cover.—R. L. Taylor.

1. In Spring—March or April. 2. If not to be over two days closed, in cool weather in March, they can be nailed up tight, without danger. There will be plenty of air around the block that will cover the entrance.—Dadant & Son.

1. It makes no difference, whether they are moved in Spring or Fall, if they are well packed and have ample food. Ordinarily, however, better success will be obtained by the novice in moving in Spring. 2. Give ample ventilation; fasten the frames so they cannot move, and in hot weather spread so that not over seven frames are spaced in a 10-frame hive. For so short a distance, water will not probably be needed, but it will be safe to put a damp sponge on top of the frames.—J. E. Pond.

1. If you had indicated the place of your abode, so that I could know something of your climate, I could give you a more satisfactory answer. In my climate I should prefer February or March, as the time to move a large apiary. But it can be done in the Fall, if not put off too late. 2. Fasten the frames so that they will not jostle about, and nail a shallow super or rim—3 or 4 inches deep is better than deeper—on top of the brood-chambers, and cover it with a thin, stout cloth, or with wire-cloth. Close the entrance and they are ready to ship safely.—G. W. Demaree.

1. Spring is preferable, as they have less honey, and may soon be able to repair any breakage. 2. That depends in a measure upon the climate. The frames should be fastened in some way, to be secure, so that they cannot strike together. Confine them securely to the hive, with wire gauze over the fly entrance. If the weather is hot and dry, would wring out muslin dipped in cool water, to keep them cool and afford moisture, and spread it upon the combs. —Mrs. L. Harrison.

1. I have had experience in moving bees, and I know that Spring is beyond comparison the better time. They should be moved before they begin to increase their stores, and before the colonies become very populous. 2. Fix the combs so that they will not swing together, close the entrance with wire-cloth, and have free ventilation in the top of the

hive. If there is room for the bees to cluster above the combs, that will be an advantage. Put them in a cattle car, and place the hives so that the combs will be lengthwise of the car.—M. MAHIN.

1. You can move them with perfect safety at either season. 2. Give *abundance* of ventilation at both top and bottom of hive—also at ends. Use wire-cloth. The frames must also be secured at top and bottom, so that they cannot slide. Secure the combs by using transfer sticks. Thus prepared they would go to California.—J. P. H. BROWN.

1. Bees may be moved at any time, if properly prepared. When the weather is cool, and the honey in the hive is not plentiful, as is the case in the Spring, is the best time to move them. Be sure that they have honey enough to live on. 2. The method of preparing them for shipment would be too long for this department. The frames should be properly fastened, and should be placed in the car so as to be parallel to the track. Abundant ventilation should be provided. An article on this subject may be found on page 268.—THE EDITOR.

Sundry Questions.

It is Verbena.

I send you herewith a piece of a honey-plant, which I would be pleased to know the name of. It has been in flower since May, and more bees can be seen upon it at any time than upon any ten other plants of which I have any knowledge.

Denison, Iowa. G. W. BOND.

[It is verbena, and an excellent honey-producer.—ED.]

Syrphus Fly.

To-day I mail you one of the finest specimens of those bees crossed with the lightning bug. Please examine and report through the BEE JOURNAL. There is no surplus honey here. It rains all day and all night. J. E. PRICHARD.

Port Norris, N. J., Aug. 7, 1891.

[The hybrid bee sent by J. E. Prichard, is a Syrphus fly; a species of eristolis. It has only two wings; a bee has four. It is different in every way. The larvæ of these flies live in cess pools, privy vaults, or any water containing decaying organic matter. The larva is cylindrical, footless, has a tail-like appendage, and is the so-called rat-tail larva.—A. J. COOK.]

Grubb's Patent (?) Frame.

I came to Oregon in December, 1889, from Nebraska, and think this is the best State I was ever in, and I have lived in Vermont, Pennsylvania, Iowa and Nebraska, and was in the Southern States during the war. I am in the bee-business here on a small scale, and think that with care and enterpise the business will pay. I have known of colonies of bees storing over 75 pounds of honey in the sections, besides filling the brood-chamber. Nearly all of the bees here are pure blacks, and the worst things to find a queen among that I ever saw. I have just received a nice Italian queen, from Henry Alley, of Wenham, Mass. On page 168 of the BEE JOURNAL is a description, and illustrations of a comb-frame patented by Mr. Grubb, of Nebraska. Three or four years ago, in Nuckolls County, Nebraska, I made frames with top-bars 1 inch wide and ¾ of an inch thick, by hand, cutting in half-way with a rip saw, lengthwise, then turning the top-bar over and cutting from the under side to this cut, taking out the piece, and then tacking it in again against the foundation with wire nails. I also made some by dressing off the corners to a V, and then taking out half of the V-shaped piece, the same as in the illustration. I also saw just such frames, I think, made and sold by James Roberts, of Edgar, Clay County, Nebr. O. H. COBB.

Dallas, Oreg., Aug. 10, 1891.

Shade for Hives.

The color of the hive has a great bearing upon the necessity for shade. Black, or a dark color, absorbs heat, while it is reflected or repelled by white. I have seen the combs melt down in an old weather-beaten hive that stood in the sun, but I never saw them melt in hives painted white, even if standing in the sun.

I have read of combs melting down in hives standing in shade so dense that the sun never shone upon them. The trouble was that growing corn on one side, and dense brush upon the other, made it so close that no air circulated.—W. Z. HUTCHINSON.

Bees and Butterflies.

Butterflies are merry things,
Gaily painted are their wings;
And they never carry stings.
Bees are grave and busy things,
Gold their jackets, brown their wings,
And they always carry stings.
Yet—isn't it extremely funny?
Bees, not butterflies, get honey.

Topics of Interest.

Humbuggery in the Queen Trade.

C. J. ROBINSON.

Ever since the introduction of Italian bees into this country, in September, 1859, the breeding and sale of queens, that took rise in 1861, has been a lively and competitive business. Mr. J. P. Mahan, of Philadelphia, was the first who succeeded in rearing queens for sale, which he bred from his imported Italian bees; and he was the first to advertise them. The same season the Rev. L. L. Langstroth, Richard Colvin, and three or four others advertised queens for sale.

Every one of the breeders I have alluded to were strictly reliable men, who would scorn to be guilty of any species of fraud or deception. I received queens from Mr. Langstroth and from the first that Mr. Mahan sent out. It was a great satisfaction to feel sure that the queens received from those breeders were just such as the breeders represented.

Now, "how changed the gold." I will not claim that *all* of the breeders of queens are not honorable, but some of those who have ordered queens from noted breeders have received inferior specimens, and of a different breed from the one ordered. One of the many cases of this kind, is that of a gentleman of Sandusky, Ohio. In 1887 he ordered a Holy Land queen of a noted breeder, who advertised extensively, and when progeny of the queen he received on that order hatched, they were identified as Italians by competent experts. Mr. ——— certifies that he mailed a few of the daughters of that queen to the breeder who sold him the queen for a Holy Land bee, and asked for an explanation. The only response he received from the breeder was: "Queens and bees received; they are nice bees."

Bee-keepers who order queens may well distrust those breeders who puff the queens they offer for sale.

There is confusion among bee-keepers as to the identity of the differently named bees, and their comparative merits.

The most recent humbug is the puffing of *yellow Carniolans*. Whoever considers for a moment the term "yellow Carniolan bees," will realize that they are a counterfeit. Do readers fail to note the fact that two different races or types of bees cannot be natives of one country? If the native, or typical, bees of Carniola are not yellow, what is to be said of those who have invented the name, and advertise and puff the yellow Carniolan, which can only be a hybrid bee—a cross between yellow bees and the Carniolan bees?

Now, let us see what the record proves: Mr. E. L. Pratt has boomed "yellow Carniolan bees." He has long claimed to be a practical expert in bee matters, and well posted—a teacher in all matters pertaining to bees. Let us review his statements concerning the identity of the Carniolan bees. On page 78 of the *Bee-Keepers' Advance* for May, 1890, Mr. Pratt recorded the following: "Bro. Mason, we think you make a mistake when you say that pure Carniolans show yellow bands. *Pure Carniolan bees should show no yellow bands,*" and he emphasized the last sentence by italics. Also, on page 585, of the AMERICAN BEE JOURNAL, for 1890, Mr. Pratt penned a sentence, which reads as follows: "'Purity' should be the watch-word, and I claim that the pure Carniolan should show no yellow." Mr. Pratt wrote what is here quoted prior to the invention of his yellow Carniolans, and he is responsible for the discordant statements, which form a discrepancy not possible to be reconciled by careful consideration.

I have no interest in the queen trade more than to caution purchasers. I repeat, that there are no real "yellow Carniolan bees"—no such bee can be shown, for none ever existed. From whence were the so-called yellow Carniolan bees obtained?

I am aware, too, that some purchasers also attempt to practice fraud on breeders and importers. I know of one who ordered imported Carniolan queens of a German importer, and attempted to cheat him out of a queen. I have before me the letter of the party who ordered the queen of the importer. He says: "I lost the queen because I had nowhere to put her, and was not ready; you must send me another"—demanding another imported queen for the reason that the purchaser stated that he lost the queen sent on his order.

No expert bee-keeper will believe that a queen breeder, and expert bee-keeper, who has many colonies of bees, and lots of "nuclues colonies," could not take care of an imported queen at any time. "No place to put her" is too thin.

If a purchaser receives a queen that does not fill the order, or he has no place to put her, what is the duty of the party receiving the queen? Assuredly the recipient should promptly remail the queen to the party who sent her. If the purchaser lets a queen die on his hands he accepts her, and has no valid claim on the seller for another, or for indemnity.

Prior to writing as I have just quoted, the same purchaser wrote to the importer a postal card, which is before me, and it reads thus: "About a week ago I received a queen; supposed it came from you. Thought I would introduce her this morning. When I saw her I pinched her head off—a little, mean black queen; she would not live till spring." This is the queen he demanded should be replaced by sending him another. If the queen was such as the purchaser represented her to be, he would, if honest, have remailed the queen, returning her to the importer. He had no right to kill her. How could the party receiving the queen know that the queen "would not live till Spring." The purchaser writing as I have quoted, convicts himself of an attempt to defraud—to get another queen by misrepresentation.

These wrongs ought to be done away with, and there can be no more practical way of accomplishing it than by an exposure of the transactions.

Richford, N. Y.

Carolina Bee-Keepers' Convention.

JAMES K. RANKIN.

The Carolina Bee-Keepers' Association met at the Court House, in Charlotte, N. C., July 30, and was called to order by Vice-President Griffith.

The session was opened with prayer by J. R. Rankin.

Minutes of last meeting were read and adopted.

The roll was called and the members responded.

The name of T. B. Brown was placed upon the roll of members.

Reports from the Secretary and Treasurer were received and adopted.

Annual dues were called for and paid by all members present.

Report of Executive Committee was to the effect that the wishes of the Association in regard to printing constitution and by-laws were carried out. The report was adopted.

Vice-President Griffith addressed the Association.

An essay on marketing, by A. L. Beach, was read and discussed.

On motion it was ordered that the Association meet three times a year—February, July and December—and that the President fix the day.

Moved and adopted that the *Mecklenburg Times*, *Agricultural Bee* and AMERICAN BEE JOURNAL be requested to publish the proceedings of this meeting. It was further ordered that a rising vote of thanks be tendered to the *Mecklenburg Times* and other journals for so kindly giving notices of our meeting. The Association adjourned to meet in December, at the Court House in Charlotte, N. C.

What Can be Done with Honey-Dew ?

C. H. DIBBERN.

The early honey harvest is now over, and we have a fine crop of honey-dew, as a result of all our efforts. The honey gathered during June is very dark, though capped white, and is of very poor quality. The complaint is quite general all over the West, and is the worst dose I have seen in my twenty-five years' experience. I have thousands of sections filled with the stuff, and the brood-chambers are also full of it. This misfortune has overtaken our industry at a particularly bad time. Last year was almost an entire failure, and bee-keepers were looking hopefully to the present year to give them an old-fashioned yield of fine clover honey to help them out financially and restore confidence in the business.

What to do with the stuff is now the problem. Already farmers are bringing it to market and selling it for what they can get. In selling such stuff, farmers have a great advantage over the professional bee-keeper. They take their few hundred pounds to their grocer, who dares not refuse it for fear of losing their trade. He perhaps argues with himself, that as there is not much of it, he can soon "work it off." He buys it cheap, too; but what is the result?

A customer comes in, and seeing new honey, and so cheap, too, buys a few sections and takes it home as a surprise for the family. Somehow the "surprise" does not turn out just as expected. When it is cut out of the sections, the honey does not look as it used to, and a taste of it is enough for most of the family, and they at once conclude that the bee men have been playing some new trick on them. It is needless to say that the demand for honey will be very limited for a long time in that family.

Bee-keepers who have any regard for their reputations, should not try to sell this stuff for good honey. If it can be sold for manufacturing purposes, well and good. But if it cannot be sold, what are we to do with it? That is just what I have been studying over for several weeks. It wil not do to Winter bees on, as past experience has demonstrated time and time again. Fortunately the flow from this source is now over, and the Fall crop of honey promises well. We are now extracting the whole lot and storing it in barrels, and will keep it for Spring feeding. This is quite a loss, and a great blow to our expectations, but it is the only honest and rational disposition we can make of it.—*Western Plowman.*

Bee-Buzzings from the Apiary.

DR. C. C. MILLER.

Did not get as much honey as you expected, did you? Pretty much the same everywhere, as near as I can make out by reports.

I never saw more white clover than this year, and it seemed to open up well, but somehow the big crop did not come.

Perhaps it was the weather. It was the coolest July on record in Northern Illinois. Especially were the nights cool. Not a night all Summer when people were hunting around for a cool place to sleep.

One comfort is that if honey is scarce it ought to bring a higher price. A little higher, for honey seems not to go more than just so high, no matter how scarce. It is a luxury, not a necessity.

"Do not hold your surplus honey if prices will justify," is good advice; but on the other hand, do not be in a fever to rush it off at any price you can get, when you know that it is so scarce that there will be little on the market by Spring.

Where do you keep your honey? Comb-honey keeps best in just the same place that extracted does. I have seen a close, cool, dry place recommended. That is all right, except that I would not have it close, and I would not have it cool. At least I would not have it close until thoroughly ripened. Let a draft pass through the room in which it is kept, and evaporation can take place. The hive is the best place for evaporation, but if you leave comb-honey on the hive, the comb becomes dark. For extracted-honey no harm comes to the honey from leaving it on, if it suits your convenience in other respects.

Dadant & Son leave all honey on the hives till the close of the season, having it all sealed up before extracting.

I work altogether for comb-honey, but most years I have at least a few combs to extract for my own eating, and I like to let the bees have them all Summer, so the honey is thick and rich.

A hot place, not cool, for ripening. A room where the sun shines on it all day long, with the walls painted a dark color, and the nearer the roof the better. Indeed the garret is one of the best places to keep honey, if you have not too much of it.

R. L. Taylor keeps comb-honey from one year to another in fine condition by keeping fire in the honey-room in Winter.

Wherever salt will get moist is a bad place for honey. Your wife can tell you the places where the things get damp and mouldy; do not put your honey there, but put it where things dry up.—*Stockman and Farmer.*

An Experience with African Bees.

W. D. RORKE.

An item in the Bee Journal, calls to mind an experience of my friend in connection with African bees, that brings the "ton and a half of honey" out of the realms of romance into the regions of probability.

When a youth he entered as ship's boy, along with several lads, on a vessel bound for the "Cape." While lying becalmed off some point on the African coast, he, with several of the crew, got permission to go ashore. In the course of their rambles they discovered a cave in the face of a hill near the shore, from which bees were issuing. They determined to explore, and doing so saw the roof of the cave some fifteen or twenty feet above them, and, as far in as they could see, covered with huge masses of comb and bees. My friend and another lad went in search of poles, and finding something suitable, returned to the cave where the others were waiting in anticipation of a glorious feed. Like the "two young bears of wanton mood," of which the old English Reader used to tell us, they thought they had nothing to do but take and eat.

With the pole, they brought down a mass of the comb large enough to supply the ship's crew for a week, and with it millions of bees. They never tasted it. Luckily for them they were near the water. It was every man for himself, and let the bees take the hindmost—and the bees took them. Some of the crew were fearfully stung, and were only saved by plunging into the water, and swimming to the boat.

It is some years since the above was related to me, and I regret that I cannot call to mind what part of the coast it was on, as it might throw some light on the African bees, and what is being said and written about them.

The gentleman in question is Mr. Benjamin Wood, of Toronto, and if this should meet his eye, he would much oblige many readers of the JOURNAL, myself, and I am sure its able editor, by giving a detailed account of the affair.

Bognor, Ont.

Mr. D. A. Jones comments upon the above as follows:

We do not wonder that when they pushed down a large mass of comb and bees that the boys had to take to their heels. We have had some little experience with African bees, and one of the worst stingings we ever had was from these bees. It was in the garden belonging to the Khedive of Egypt.

In strolling through his fine grounds, we came to the apiary, and wishing to have some samples of his bees, stooped down in front of a hive, and commenced catching the bees by their wings, and slipping them into a small vial of alcohol, which we usually carried to preserve specimens. During the operation one of them happened to turn and get her sting into our finger, and as soon as the odor was caught by the other bees they swarmed in. on us in thousands. The bottling business was soon stopped, and we made for a very thickly-wooded bush, but they could fly as quickly as we could run, and although the wood was very thick it did not prevent a large number from sticking to us, and our recollections now are that those we killed stopped following, but the rest stuck to it.

We believe that African bees would follow a person almost any distancce, but it seems hardly probable that the kind of bee found in the northern part of Africa would be likely to store such large quantities of honey, and can only account for it in this way: as they swarmed, the different swarms clustered in the under side of the cliff, and although they were separate colonies, their combs might be built adjoining each other.

Doubtless many still remember Mr. Benton's getting specimens of *Apis Dorsata*, in Ceylon, where he found a large number of colonies all clustered on the under side of a cliff.

Although their combs were very large, and some of them close together, yet there were about 14 colonies. In a country where the bees have to get on the under side of cliffs in the absence of any other place, it is not unreasonable to suppose that a large number of colonies might be clustered together.

A friend, writing us from India, stated that he saw a large number of colonies so clustered, and he termed it a small village of bee colonies attached to the under side of a cliff.—*Canadian Bee Journal.*

Re-Queening Apiaries with Punic Bees.

E. L. PRATT.

The Punics are truly wonderful bees, and are answering to all their claims. Mr. Alley says: "They are the most prolific, gentle and hardy of any race or strain of bees I have ever had anything to do with. They will supersede the Italians."

The queens are the most even layers I have ever seen. Lift a fresh comb from a Punic colony, and one will see the most beautiful work in the way of egg-laying ever beheld. Every egg will point downward in line with the grain of the cells, and one could swear that the queen used a straight-edge when putting them in. Not a cell will be skipped.

The bees are as quick as a flash, and are off to the field in almost no time. On their return they look and act like robber bees—with the same quick motions. They pass through the traps in a moment. It does one's heart good to watch them: I never before saw such lightning rapidity in motion. I have spent hours watching them, and picking them up in my fingers, as they go and come, simply to hear the little fellows squeal, as a young queen will when handled.

They refuse to sting. If the sting happens to stick a little into one's skin while being rolled about in the fingers, how quickly they withdraw it and fly away.

It is a grand sight to open a full colony of Punics and see all the little "niggers" at home, so quiet, so unconcerned, and, to me, so beautiful—because of their usefulness, and not of the 5 gold bands. The Punics put the gold into their keepers' pockets, which is better than on their little backs.

Their length of life and hardiness are something remarkable. I had some imported queens come a few weeks ago that had been on the road 28 days, and after the queens had been introduced the attendants lived fully two weeks longer in confinement.

The queens I have reared by improved American methods, are what would be called large queens, and when they commence to lay are a beautiful sight on the combs. The drones are unusually large and powerful-winged fellows, as black as jet.

The worker-bees are very small, short-bodied, large-winged and the most energetic workers. Their motions are more like those of a hornet than of the honey-bee.

They work with more vigor than a newly hived swarm. I believe a three-frame nucleus of Punics will build up to a full colony fit to Winter in less than six months' time, without aid.

What a poor show an apiary of any of our present races would have in the same field with the same number of Punic bees. A well-known apiarist says it would settle the "Priority of Location" business.

Beverly, Mass.

* * *

Vaseline Prevents Propolis in Bee-Escapes

G. W. DEMAREE.

By to-day's mail I send you one of my trap-door bee-escapes for your Museum. It was described in the *Review*, of last month.

The plan on which it is constructed is entirely new, as applied to bee-escapes. It consists of a tin chute, suitably flanged to fit into a mortice in the escape-board, while its essential feature is a nicely-adjusted "trap-door," made of tin, and so delicately hinged that the slightest touch causes it to swing outwardly and the bee, or bees, pass out, while the door swings back to its balancing poise. But a "stop" prevents the door from swinging back far enough for the bees to return. Thus mechanical force is brought to bear to prevent the bees from returning after they have passed through the escape into the department of the hive below the escape-board.

The careful experimentation of Mr. John S. Reese, of Winchester, Ky., one of the brightest geniuses in the bee-keepers' ranks, and my own experiments, have satisfied me that the labyrinth idea is a failure. Though the bees, in their restless, unceasing motion, may be unable to systematically return through the labyrinthine escape, still too many of them will straggle through to make the plan a success.

When I began my experiments with a mechanical device to pass bees *out* of surplus cases, and prevent their return, I found propolis, or "bee-glue" to be the great hindrance. Bee-glue will soon disable the delicate hinges—the finely adjusted working parts—of any mechanically planned bee-escape.

On a fair trial of Mr. Porter's ingeniously contrived spring escape, in the "heated term" here, when propolis is abundant and our bees handle it without stint, the dancing little springs, so suple and practical-looking, when new and clean, would become disabled and work sluggishly, and nearly fail at times, by reason of being daubed with soft propolis; but I am pleased to be able to say that I have overcome this difficulty by the application of vaseline.

With a little brush the odorless essence of petroleum is applied to the hinges or springs at all points where bee-glue might do harm. It is a perfect remedy against bee-glue, and I believe that vaseline will find extensive use about bee-hives in the future, when its efficiency is better understood.

I have been suffering again this Summer with my old sciatic trouble, and had it not been for the help my little trap-door bee-escape gave me, I certainly would have been unable to take a large crop of surplus honey, as I have so easily done by its use. I am so situated that I cannot get intelligent help, and therefore machinery must supply its place.

The honey yield was fairly good here, this season.

Christiansburg, Ky.

[This bee-escape is the smallest one yet devised. The escape proper is but 1x½x2¾ inches. It is wonderfully simple, and the trap acts promptly upon the least touch. It is placed in our Museum, for the inspection of visitors.—Ed.]

How to Conduct a Bee Convention.

A. O. CALHOON.

The object of assembling ourselves together, if I understand our position correctly, is to counsel with and advise each other that we may, by the wisdom thus gained, be the better enabled to carry into execution the injunction of our Father, delivered on the sixth day of creation.

We find that after He had made the earth and all things therein for the use of man, He created man, and commanded him not only to propagate his species, or to be fruitful, but enjoined upon him the necessity of multiplying and replenishing and subduing all things placed here for his use and enjoyment.

In proportion, as we see this command obeyed, do we see the human family enjoying the necessities, comforts and luxuries of life. Take, for example, Cain's profession, as he walked forth to till the fields. He found them covered with the thorn, crab-apple and wild oats. In these were possibly the bare necessities of life, but to-day we see these subdued and replenished with sweet clover, maidens-blush and smooth headed corn, multiplying, some sixty and some an hundred fold. The stockmen of to-day would see much to praise God for if they could only look backward to the flock of Abel.

Tubalcain's profession, in the hands of a Corliss, turns out engines, instead of trinkets. Fire and flood have courted, and out of that courtship has come forth the legitimate child of steam power, that is doing more for the human family to-day than the lost art of the pyramid age.

The astrologers and magicians of Egypt are supplanted by the Hickses and Edisons of God's Israel restored, and last, but not least, the honey-bee is no longer left to build in the carcass of dead animals, and so vicious that the traveler is in danger when passing by, but a beautiful, practical house is furnished her, and help in time of need, in the way of food in famine, shelter in Winter, legal protection in time of ignorant ire, and she is so pleased with this treatment that she has become the harbinger of man and helps him to multiply and replenish the earth with fruits and grain, charging them their richest of nectar, which she yields up to man for his kindness to her.

Now, therefore, that we may multiply, and replenish and subdue the honey-bee more to the welfare of herself and the human family, and thereby obey the command of God, have we met in council.—*Read at the Missouri Convention.*

Securing the Necessary Rainfall.

HENRY L. PENFIELD.

In the issue of the BEE JOURNAL dated Aug. 24, 1887, page 534, you will find an article headed as above, outlining my views on that subject. The late experiments in Texas, under the management of Gen. R. G. Dyrenforth, United States Department of Agriculture, further the views expressed in the article referred to.

The tests are not completed yet, but as far as made have been successful in producing a satisfactory rainfall where needed.

Senator Farwell, of Illinois, is, I believe, the author of the bill, which was passed last Winter, to appropriate $2,000 for the experiments.

The demonstration of the truth of the theory, will be of incalculable value to agriculture and the production of honey, and there will be no more damage to crops by drouths.

[The article is almost prophetic, and in order that our readers may the more readily comprehend Mr. Penfield's article, above referred to, we republish also the article by Mr. Thos. E. Hill, to which reference is made.—ED.]

Following is Mr. Hill's article:

During a recent journey to Europe the passage across the ocean was especially unpleasant, because of fogs, the only consolation in contemplating them being that they represented the work of Nature in drawing moisture from the water, which, wafted inland, fell upon the soil in refreshing rain, gathered in the brooks and rivers and flowed to the sea, to be again thus sent back to freshen and brighten the parched earth.

The speed of our vessel was materially retarded by winds from the West, a common occurrence in the Summer season. The fogs and moisture, through the winds, are driven upon the Continent, where drouth seldom prevails, and particularly do they freshen the verdure of Ireland, and hence the brilliant green of the Emerald Isle.

In reflecting upon this subject, I contemplated the drouth then prevailing in several of the Western and Middle States of the Union. What had they to gather rains from? Alas, what have they? For a generation our farmers have been draining their lands of moisture. They have run their tiling through every slough; they have drawn out the water from every swamp; they have dried up the pond; they have obliterated the beautiful little lake. In doing this, they have made such easy and rapid egress for rainfall from the soil as to endanger the homes and farm lands of all the settlers along the great rivers in the southern regions of our country, already inflicting great distress, loss of life and property equaling in value many millions of dollars—an evil which is growing in magnitude each year.

The result of this wholesale draining of the upper country of water is not only thus disastrous to life and property along the larger streams, from frequent overflow, but there is such absolute drainage of moisture from the earth as to produce severe drouth, accompanied by such intense heat and dryness of atmosphere as result in the hurricane, the cyclone, and innumerable village, prairie and forest fires.

In the early days, when the process of evaporation of moisture went forward from the swamps, the ponds and lakes of our Western and Middle States, an extended drouth, with extremely intense heat, was a rare occurrence. In those days sun-stroke was very uncommon, and the cyclone was comparatively unknown. This year we are in the second season of drouth in various portions of the country, while every year brings its devastation from wind, the result of an excessively dry and frequently disturbed condition of the atmosphere.

With the land thus denuded of natural water supply, there is but one course for our farmers to pursue to save themselves from these evils. They may drain their soil, but they should gather the rainfall in ponds and lakes scattered throughout their lands. Instead of running their drains through and out of the swamp, they should lead to an excavation of such size as circumstances will permit, which should be made at a depth of 3 or 4 feet, where the water can gather and will remain throughout the year, quenching the thirst of animals, giving drink to birds, a reservoir in case of fire, a home for fish, a place of beauty on which one may sail the boat, an opportunity for the bath and for teaching the young people to swim. This will yield ice for the family, provide skating for the happy youth in Winter time, and moisture, which, through evaporation, will pass into the clouds to be returned again through rainfall to the needy earth.

No fear need be entertained of stagnation from water thus held in reserve. Fish will of themselves purify it. Every rain will change it, while, if the lake covers an acre or more in area, the wind will constantly keep it pure. In proof of this, the writer has an artificial lake on his farm, the result of dredging a swamp, which is filled only by rainfall, the water being, in the dryest season, always perfectly clear and fresh.

On the low lands the general abandonment of farms and homes from river overflow will be the inevitable outcome of this water wastage in the high grounds. Such is already the fact, while the expenditure of many millions of dollars by the Government, in the construction of levees and embankments along the great rivers, will be necessary for the further protection of adjoining property. Vastly better that this expenditure be made in holding the water where it is required in the up-country.

Dot the farms of our inland States with ponds and miniature lakes, and while they will afford health, attraction and pleasure in a thousand ways, they will give us back the uniform rainfall we had in the early settlement of the country, when successive seasons of drouth, forest fires and cyclones were unknown.

[This is one of the serious questions of the age—and should be thoroughly ventilated. It may be that Mr. Hill's theory concerning the cause of drouth and cyclones is correct. At any rate it should be discussed, and some means devised to overcome these troubles. They effect bee-keepers as much as any other persons. The bees need water. The drouth dries up the nectar and ruins the prospect for a honey crop.—Ed.]

Mr. Penfield's article, which he refers to in the first paragraph, is as follows:

The article of Thos. E. Hill on "Drouths and Cyclones," on page 437, has greatly interested me. Bee-keeping and farming are intimately associated with us; the rainfall is an indispensable necessity, and, as we used to say when working out problems at school, the "unknown quantity" that we are trying to get. The editor invites the readers by a "postscript," to work out this problem of the cause of drouths and cyclones.

In this vicinity we are more interested in the cause of drouths, not having had a good crop-year since 1879, nor a good honey-year since 1883, from the reason of need of rain at seasonable times. We know how indispensable that factor is to the industries of farming and bee-keeping, and that they are consequently lotteries as now run, that are about to ruin us or any country where it is so uncertain as here.

Would it not be well for us mortals to have this part of the "whole business" under our control. I maintain that our Creator has nothing to do with the details of this important factor to success in the industries mentioned, but that it is left to us to control it if we would, like any other part of our labor. It is so in Dakota, where irrigation makes it as certain as any other employment.

Now the question is, what is the best way for the different locations to arrive at this much-desired result. I do not believe that a fervent prayer will come at it generally, for that has been tried so many times and failed, that we are "left" to some other alternative hereabouts.

It may be that there are local causes that make the drouth worse in some places than in others, and I think that we are free to investigate this matter. We have noticed that the sun draws water from small or large bodies of water by evaporation, and that soon after the clouds gather and follow the water courses, and sometimes the wind carries them over and beyond these influences to be operated on by other influences. We know how apt it is to rain about the 4th of July in large cities, and in the vicinity of battle-fields during or shortly after an action. I believe, as Mr. Hill says in his article alluded to, that where the water was dammed up in ponds and lakes, more generally in farming countries, then when the sun was seen to have the effect of drawing water and collecting it in clouds, and at a near time to set off some explosive high in the air, that places accustomed to having the rains go around would be benefited by a good shower of rain.

We know that at certain phases of the moon we are more apt to get rain when the indications are favorable as before stated. I notice that a weather prophet predicts rain at a certain time in the vicinity of Quincy, Ills., near where there is a large area of bottom land in Missouri for evaporation, and his predictions are very often verified for his location.

When, by investigation, the causes of drouths in some places can be ascertained, then the remedy may be sure to follow.

Hunnewell, Mo.

[The idea that the effect of heavy discharges of explosives is to produce rainfall, is not a new one. And it is a curious fact that the belief that battles occasion rain antedates the invention of gunpowder.

Arago, in "Thunderstorms," pages 164, 165, relates that as late as 1810, it was the practice in the communities of Southern France to fire off batteries, especially kept for the purpose, in order to *dispel* violent rain and hail storms which were undesirable.

Napoleon has been credited with making use of the experience, that battles produce rain, in the disposal and manœuvering of his troops, and the belief has since become quite current that cannonade and rainfall are cause and effect.

The most extensive effort to collect evidence bearing on this point, is that made by Mr. Edward Powers, in his book entitled, "War and the Weather, or the Artificial Production of Rain," published in 1871, when the extraordinary amount of rainfall, co-incident with the war in France, gave the subject prominence.

The belief that great fires cause rain is also a very old one, but Espy first, in 1839, proposed experiments "to see whether rain may be produced in time of drouth, making a large body of air ascend in column, by heating it." He also brought forward evidence that the eruptions of volcanos, and large fires were followed by rainfall.

The reports from the Morris ranch, 24 miles from Midland, Texas, where the experiments are being conducted, are of a cheering nature, as already the parched earth has been pretty thoroughly saturated with rain, following in some instances in the footsteps of the explosions, and at other times within 48 hours thereafter.

Secretary Rusk is reported as having said that he has considerable faith in the experiment, and although the press had published glowing accounts of the same, yet the matter had not been overdrawn, but rather underestimated.

That the government force in Texas are not destined to carry off all the honors as rain-makers, is evinced by a dispatch from Cheyenne, Wyo., published in the Chicago *Tribune* of last Monday, which will be found below.—Ed.]

Cheyenne people have engaged Melbourne, the rain-maker, for a series of experiments in rain-production in the arid portion of Wyoming. Arrangements have been completed, and Melbourne will be here from Ohio next Wednesday.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Sept. 3.—Susquehanna County, at So. Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

Sept. 9.—State Association, at the Fair Grounds, Springfield, Ills.
Jas. A. Stone, Sec., Bradfordton, Ills.

Sept. 15.—Ionia, at Ionia, Mich.
Harmon Smith, Sec., Ionia, Mich.

Oct. 14, 15.—S. W. Wisconsin, at Fennimore, Wis.
Benj. E. Rice, Sec., Boscobel, Wis.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

North American Bee-Keepers' Association

President—P. H. Elwood....Starkville, N. Y.
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y and Manager—T. G. Newman, Chicago.

Bee and Honey Gossip.

Preventing Dampness in Cellars.

This is inquired about by a "Constant Reader," on page 244. One of the simplest ways of drying out a damp room, is to build a fire in it. If there is any means of conducting the smoke away by a pipe leading to the chimney, or in any other way, a small cylinder stove will be a good thing. Keep up a steady, low fire, and for this purpose hard coal is excellent. If this is not practicable, it might be well to carry heated stones into the cellar. I think the dampness would be sensibly lessened by quicklime. The lime, in slacking, absorbs a large amount of moisture, and the more it absorbs the drier will the cellar be.

Marengo, Ills. C. C. Miller.

Extremely Good Crop.

My bees are doing very well—some colonies extraordinarily well, as I have taken from a few hives about 200 pounds each, of comb-honey, in one-pound sections. I use the Bristol hive.

John H. Dakin.

Schenectady, N. Y.

Most Discouraging Ever Known.

The honey crop in this section, is almost a complete failure. While a few bee-keepers in the southern section of the county report a part of a crop, the northern portion of the county is entirely destitute of surplus. Buckwheat seems to be yielding considerable nectar, but as far as I have learned, the bees are storing it principally in the brood-chamber, the dearth of honey during July having left most colonies short of stores. I am satisfied that this will prove to be the most discouraging season for bee-keepers ever known in the county.

H. J. Rogers.

Stanard's Corners, N. Y., Aug. 12.

Why Not Read Up?

It seems strange that so many persons do not read up on the points upon which they desire information; but perhaps they are like a neighbor of mine, who has *kept bees* all his life, but at last came to see me and began asking questions. I offered to loan him my bee-library, and he took one book, but brought it back in a few days, saying that it seemed more real, and he could understand better, to ask me, and let me explain. Now, I like to answer questions, but prefer to answer those that show that the querist has some general knowledge of the subject.

J. E. Pond.

North Attleborough, Mass.

A Good Example.

There has not been more than one-half inch of rain in this locality since about June 15; in consequence, the corn crop will be light, and but little honey has been stored by the bees. I have a strong colony of common bees, in good condition for work, and if the Fall flowers yield nectar well, we may get some honey yet. I have read Mr. A N. Draper's article, page 200, and shall at once apply for membership in the Illinois Bee-Keepers' Association, to help on the cause. Now, let everyone interested in bee-culture do as I have done, and Mr. Draper will find his hopes realized very soon. "In union there is strength."

D. A. CADWALLADER.

Prairie du Roche, Ills., Aug. 17, 1891.

* * *

Good Honey Crop.

I think the honey crop has been good in this vicinity. I had 60 colonies, Spring count, which have increased to 120 colonies. The bees are gathering considerable honey from buckwheat and wild flowers at present. I have extracted 11,400 pounds of honey, of which 11,000 pounds is from basswood, very light in color and quite thick.

J. J. MARSHALL.

Valley P. O., Wis., Aug. 9, 1891.

* * *

To the Bee-Keepers of Nebraska:

At our last annual meeting of the Nebraska State Bee-Keepers' Association, the time of annual meeting was changed to Wednesday and Thursday, day and evening sessions, September 8 and 9, 1891, State Fair week, in Bee and Honey Hall, State Fair Grounds, Lincoln, Nebr. This change was made in order that you may take advantage of the low rates then offered to see the largest and best exhibit ever offered to the people of the West, as well as to show sample of the product of your apiary.

In order to make this branch of the Nebraska State Fair a success, it will be necessary for everyone to take hold and place something on exhibition, be it ever so small. It has been decided to decorate the front of the honey house artistically with samples of the different honey and pollen-producing plants grown in the State. Will you not take an interest and gather a selection of these plants for this exhibit, and forward them with your honey exhibit, by express, prepaid, to E. Whitcomb, State Fair Grounds, Lincoln, Nebr.? All railroads carry freight free.

Nebraska is getting ready to take her proper place with the world in the great World's Fair, and as bee-keepers we may claim a position in this exhibit, based upon what we are able to show at our coming State Fair. Commodious quarters will be provided for the meetings to be held on the Fair Grounds, and you are urgently invited to attend, get acquainted with your fellow bee-keepers, bring what you have to exhibit, and see what others have to offer. Such gatherings are never-failing sources of information and profit.

I am informed by Mr. E. Whitcomb, the Superintendent of the bee and honey department, that the Bee and Honey House shall be your headquarters, and that everyone interested in the production of bees or honey, in this or any other State, will always find a welcome there. The State Fair Association has enlarged the list of articles in this department, and almost doubled the amount of premiums.

Lists can be had on application.

J. N. HEATER, *Secretary*.

Columbus, Nebr., Aug. 17, 1891.

* * *

Very Promising.

The honey-flow is now the most promising that I have known in this county. The bees are storing honey rapidly, and swarming is at its height.

J. C. WOODWORTH.

Ayr, Nebr., Aug. 17, 1891.

* * *

Almost a Failure.

The honey harvest is about over in this locality, and I will say that it has been almost a failure. About all the honey gathered has been from red clover, and it is dark in color on account of its being stored so slowly. There was plenty of white clover, but it secreted very little nectar. Basswood had plenty of bloom, but not a bee could be seen upon it. Our season was wet up to August 1, but now is hot and dry. I had 107 colonies last Spring, which have increased to 150 colonies, and will get about 1,000 pounds of comb-honey. I have a non-swarming hive, which I have been testing for two years, and it has proved a success. Ten colonies have finished 64 sections each, and are working on 32 sections each, at the present time, which are almost half filled. This non-swarming hive is very simple, and the principle can be applied to any hive, the cost not being more than 30 cents per hive. I will send you a sample of the appliances as soon as I can send my model to Washington. A good many bee-keepers have come to see this attachment in operation, and like the methods very much. Some have bought the appliances, and others have ordered them sent by mail.

JOHN CONSER.

Sedalia, Mo., Aug. 17, 1891.

Wavelets of News.

Persuading a Swarm to Remain.

A lady bee-keeper was trying to make a swarm stay in the hive the other day, and after hiving it the third time, came to the conclusion that she would try the water cure; and as soon as she shook them off the limb into her wire swarm-catcher, with the watering can she drenched them with cold water, and then dropped them down in front of the hive.

The result was, she says, that "they laid there pouting on the grass for some time, scarcely offering to move, but as the sun warmed them they gradually crawled in on the combs. I then poured another can of water over the hive, and on the grass around it, and all went in without grumbling as soon as they got dry enough to crawl, and we have no swarm that has done better work since, than this one."

She has ordered a force pump, and thinks she will try a finer spray, but feels confident that using water is a good plan.—*Canadian Bee Journal.*

Know Your Insect.

I often receive specimens of black ground-beetles accompanied with the question, How can I best destroy these "bugs?" These beetles kill immense numbers of cutworms, white grubs, etc., and so do us only good.

This year I have received scores of pupæ of our lady-beetles, hanging to plums or leaves. In every case came the question, What new insect is this that is attacking our plums, and how can we kill it? This pupa was the resting stage between the larva and adult lady-beetle. Both larva and adult feed exclusively and extensively on plant-lice. Plant-lice are terribly destructive to our plum and other trees. Thus to kill a single one of these pupa is to destroy a friend.

A long ichneumon-fly, with flat, long compressed abdomen, and very long, hair-like ovipositor, is found caught in or boring into a maple tree. The insect is sent to me with the question, How can we kill this insect and save our maples? The truth is this insect is a parasite, and was boring into the tree to lay its eggs on or near a borer. Thus it is the borer that is killing the tree; to prevent the borer from its work was the purpose of the ichneumon; the way to save the tree is not to kill or disturb this insect.

We see, then, that it is very necessary to know the habits of insects, lest we kill our friends and protect our enemies. These friends, though often very small, are very numerous. This year the grain *aphis* would have ruined the wheat and oat crops, except for a minute parasite that quickly destroyed the *aphis*.—PROF. A. J. COOK, in New York *Tribune*.

Bees Go Seven Miles to Pasture.

I live in the center of what is called the "Cross Timbers," Texas, a belt of timber that runs across Texas. Now, where I live it is about five miles on either side to the prairie.

I was the first one to get the yellow-banded bees in this part of the country, and, in fact, the only one; and the first year I got them I happened to be about two miles out on the prairie, where the horsemint was in bloom. On looking, I found it was covered with bees, and, to my surprise, I found about half of them were of the yellow-banded race.

It caused me to watch them, thinking I should find that some of my neighbors had the improved races of bees, but not so. By watching carefully I noticed that they would rise high in the air and make a direct line for my house.

I asked nearly all of my neighbors between there and here if they knew of any one who had the improved races of bees, and they said they did not, but that they knew that no one had them but myself. On this occasion my Italians must have flown seven miles for forage.—L. B. SMITH, in *Gleanings*.

Origin of the Albino Bee.

I have received letters from a number of persons from different parts of the country, who wish to know something more definite in reference to the origin of the Albino bee. The mother of the queen that produced the first bees, I received of Mr. H. A. King, Nevada, Ohio. The grand-daughter of this queen is the one that produced the first Albino bees. They were about half Albino and half Italian.

Now, the difficulty arose in my mind how to get them pure Albino. I knew it was useless to try to breed them pure in my home apiary; so I took them to the South Mountain, out of the range of any other bees, in order to get them pure.—A. PIKE, in the *Guide*.

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BEE JOURNAL

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ALFRED H. NEWMAN,
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◆

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

◆

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

◆

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THOMAS G. NEWMAN,
EDITOR.

Vol. XXVIII. Sept. 3, 1891. No. 10.

Editorial Buzzings.

Vermont's Appropriation for the World's Fair has been increased to $15,000.

◆

It is Reported that the Prince of Wales, Emperor William of Germany, and the Shah of Persia all seriously contemplate visiting the World's Fair in 1893. The Sultan of Zanzibar has decided to make an extensive exhibit, and a request for space has been cabled.

◆

An Interesting Collection from Asiatic-Russian provinces is being exhibited on the Champs Elysee, in Paris, and it is said will be brought to Chicago, in 1893. The exhibition is in charge of Gen. Annenkoff, son of the Princess Dolgorouki (morganatic wife of Alexander II.), who is the head of the great trans-Caucasus railway into Turkestan and Afghanistan. The collection comprises natural products of Central Asia, and arms, clothing, jewels, and household articles of the various provinces, as well as a panorama of a battle in Turkestan, with scenic illustrations of the snow-capped mountains.

◆

Feeding Back the honey, to have sections completed, has been often tried and proved to be too expensive. Mr. G. W. Demaree is now experimenting with it. He writes as follows:

> When I get through "feeding back" to have sections finished, and to test just how much honey it takes to finish a pound of *comb-honey*, I will send to the BEE JOURNAL, an article detailing my experiments.

◆

Asthma can be cured by the liberal use of honey, as will be seen from the following article, which is copied from the London Encyclopedia:

> Dr. Munroe, in his "Medical and Pharmaceutical Chemistry," says: "The late Dr. John Hume, of the commissioners of the sick and hurt of the royal navy, was for many years violently affected with asthma. Having taken many medicines without receiving benefit, he at last resolved to try the effect of honey, having had a great opinion of its virtue as a pectoral.
>
> "For two or three years he ate some ounces of it daily and got entirely free from his asthma, and also of a gravel complaint with which he had long been afflicted. About two years after he had recovered his health, when he was sitting one day in the office of the sick and hurt, a person laboring under great difficulty of breathing, who looked as if he could not live many days, came to him and asked him by what means he had been cured of his asthma. Dr. Hume told him all the particulars of his own case and mentioned to him the means by which he had found relief. For two years after, he heard nothing of this person, who was a stranger to him and had seemed so bad that he did not imagine that he could have lived many days, and therefore had not even asked him who he was; but at the end of that period a man, seemingly in good health and well dressed, came to the sick and hurt office and returned his thanks for his cure, which he assured him had been brought about by the free use of honey."

When Breeding Bees, breed for business. Keep a steady eye, all the time, to the best results. Beauty is but one of the characteristics of the "coming bee," and though it is very desirable, it is not the only thing to be sought after. In developing new strains of bees, the most important thing is to be able to transmit to progeny, for an unlimited time, the desirable characteristics attained. Mr. D. A. Jones, who has had much experience in breeding bees, gives, in our Canadian contemporary, a very valuable article on this subject, which we here present to our readers in its entirity. He says:

New strains and new-fangled notions in reference to bees, seems to be the order of the day. Mention a way in which bees may be improved, and it will not be long before you will find somebody advertising something, which they claim possesses wonderful merits.

There seems to be a disposition in the direction of a craze for bees that will Winter well. If memory serves us correctly, it was not many years ago that a certain gentleman in the United States advertised that he had wonderfully hardy bees for sale, that would Winter in or out-doors, in good or bad hives, under any and all circumstances. The following Winter proved conclusively, however, that such was not the case, and that a person, to be convinced, had only to gaze upon his empty hives in the Spring.

Now we fancy there is a disposition on the part of someone, to make a boom for a season or two on a special kind of bee, and by the time the public learns that this new bee is a hollow mockery, they can jump off that hobby onto a different one.

We would suggest that, as a public safeguard and a guarantee of good faith, any one having bees which they claim to be superior to all others in any respect, should send a colony or two to Professor Cook, or some of the leading apiculturists of the North American Bee-Keepers' Association, appoint a committee to test their qualities, and if they are superior in the various points claimed, that they be either awarded a diploma and the right to charge so much a colony, for a certain number of colonies, these to be distributed at the various convenient points throughout North America for breeding purposes, or that the party receive suitable Government recompense, and give them to reliable queen-breeders at special rates. The breeder in turn, to sell the queens at a price that will be within the reach of every bee-keeper.

Now, friends, we do not mean to say, that he who has succeeded in securing such a race should not be paid—far from it. Our experience in the breeding of bees, leads us to the firm conviction that bees cannot be bred properly and carefully, unless they are located in isolated localities. We have spent a great deal of money and time, in trying to rear superior races of bees, and he who can secure a fixed race in one, two or three years, is deserving of a high position in bee-keeping circles, and will accomplish what our most experienced bee-keepers have failed to do.

We shall be pleased to hear from any bee-keeper who claims to have a superior race of bees, and if, after correspondence, we fancy there is something extra-good about them, we shall be pleased to purchase a colony or two and give a good price for them. We have known colonies of bees to Winter in splendid condition for a great many years in the same hive, and a novice might have thought that they had some specially good qualities in this respect, but he would have been mistaken.

We recollect going to a place to purchase bees, which were in old box-hives. The gentleman refused to sell one colony, on account of its superiority to all others. He expatiated on the number of years that colony had stood, and said that it had cast from one to three swarms every year; that the swarms had issued sooner than others; that it never was without honey; that the bees were also good honey-gatherers, and in fact were everything that could be desired, and he put more value on that colony than he did on half a dozen others in the yard.

He did not realize that the very claims he was making for that one colony of bees did more harm than good, for the swarm of bees that issued from that colony from year to year proved to Winter no better, nor gather more honey than ordinary bees.

From his own statements there appeared to be nothing to recommend them beyond the good points of the one colony which he would not sell.

We afterward had the satisfaction of transferring that colony to a movable-comb hive, for the gentlemen in question, and the secret was not hard to discover. The peculiar way in which the combs were built in the hive, enabled the bees to form a cluster in the center, and move out in any direction to get stores, and thus, surrounded on every side and overhead with combs filled with well-ripened honey, they had everything necessary to success.

Such a condition of things could not fail to give the best of results. We believe Mr. Corneil, of Lindsay, has adopted a similar plan, with some of his colonies, and he considers it a step in the right direction. We have frequently had colonies do wonders, but never dreamt that because a colony had given good results one season, or two, that we had secured a new race of bees, and that they would duplicate themselves in this respect for all time to come.

Now, do not imagine, friends, that we think bees cannot be improved—on the contrary, we are positive that they can, but there is a way to go about it different from that usually adopted, if we wish to make a permanent success.

Iowa Columbian Exhibition Commissioners will take advantage of the big crowds at the State Fair, to distribute World's Fair literature of all sorts. They have headquarters on the grounds, and confidently hope to develop an interest which will result in a large appropriation next Winter.

This Table, showing the time it takes the bees to develop, should be familiar to every person who keeps bees:

	Queen.	Worker.	Drone.
Egg	3	3	3
Growth of larvæ	5½	6	6½
Cocoon	1	2	1½
Rest	2	2	3
Pupa	4½	8	10
Winged insects	16	21	24 days.

Patent Frame.—On page 168 of the Bee Journal, we published illustrations of a comb-frame on which a patent had been granted to Mr. Grubb, of Nebraska, stating that the plan was an old one, and that we had repeatedly seen it in use. The following remarks concerning the frame, we clip from the *Canadian Bee Journal:*

> J. N. Grubb, of Glenville, Nebr., on Jan. 27, 1891, patented a comb-frame for bee-hives. After reading the description and claims in the patent, we have come to the conclusion that he does certainly live in a "glen," or some remote place where none of the ordinary bee-literature of the day, or very little of it at least, has ever found its way. If he had read a bee-book or bee-periodical, and thoroughly posted himself before applying for his patent, we think he would never have gone that far with it, and he would have been amused at any one who would do so. It is really time that every person had learned that the first investments to be made in connection with bee-keeping, is to procure a stock of the best bee-literature of the day.

Melbourne's apparatus for experiments in rain making has been kept in a securely-locked and guarded barn at Cheyenne, Wyo., and he will allow no one to inspect the interior. The United States signal officer has been added to the committee in charge, and an accurate report will be kept of all atmospheric changes during the time of the experiments.

Live Stock.—Chief Buchanan, of the Department of Agriculture for the World's Fair, has completed a scheme for the distribution in premiums of $150,000, which the Board of Directors appropriated for live stock awards. Before making the distribution Mr. Buchanan called in a number of experts, and after consultation with them he figured the proper distribution approximately as follows: Horses, $52,000; cattle, $30,000; swine, $20,000; sheep, $15,000; poultry and pet stock, $10,000; dogs, $4,000; total, $131,000.

This showing leaves $19,000 as a contingent fund, which Mr. Buchanan thinks should be held until it is ascertained whether breeds will be exhibited in sufficient number to entitle them to compete among themselves.

Very Punctual.—I was surprised to receive the feeder as soon as I did. I like it very well. I receive mail matter in a shorter time from you than from Carlisle, O., only eight miles from here.

John H. Rohrer.

Tippecanoe City, O., July 16, 1891.

Queries and Replies.

Foul Brood—Its Effect on the Honey.

Query 782.—1. What is the cause of foul-brood? 2. Does foul-brood in a cell harm the honey in adjoining cells, not effected with the disease? 3. Does foul-brood in an apiary injure the honey for market or table use.—Wis.

1. *Bacillus alvei.* 2. Probably not. 3. I do not know that it does.—C. C. Miller.

1. I do not know. 2. I think it does. 3. I should not like to eat such honey, or offer it for sale.—C. H. Dibbern.

1. Who can tell? 2. Yes, for the larval bees. 3. No; provided no bees ever get any of it.—G. M. Doolittle.

1. I do not begin to know. 2. Do not know. 3. Do not know, having had no experience, but should suppose it would not.—James Heddon.

1. What Chesire calls *Bacillus alvei*, is, without doubt, the true cause. 3. Would not advise the selling honey from a colony that has foul-brood.—G. L. Tinker.

1. *Bacillus alvei.* 2. You do not say for what purpose. I would rather not eat the honey from adjoining cells, and I would not consider it safe food for bees. 3. Not in colonies not effected by the disease.—M. Mahin.

1. Said to be a fungus. 2. If foul-brood is caused by a fungus the spores would be transmitted to all parts of the hive, and the honey likewise effected. 3. I should condemn all such honey as unfit for table use.—J. P. H. Brown.

1. It is a contagious disease, like smallpox in the human family. What originates that? 2. I should think so; the air in the hive is foul. 3. I do not want any of it "in mine." Have had no experience with the disease.—Mrs. L. Harrison.

1. A fungoid organism. 2. Yes, to feed the bees. It should be boiled a few minutes, then it is safe food for bees. 3. No. Of course, it would need to be carefully extracted, and as the germs are in it, it is always better to boil it and feed to the bees.—A. J. Cook.

1. *Bacilli* attacking and killing the brood. 2. It harms in so far that it would probably convey the disease if fed to healthy bees. 3. A colony much effected will gather very little honey. If a colony is so little effected that it stores honey in the surplus apartment, I think such honey good for table use.—R. L. Taylor.

1. Who can tell. I confess I cannot, although I know the particular cause in my own apiary, viz.: feeding honey not thoroughly heated so as to destroy the germs, such honey having been taken from an infected hive. 2. Yes. It effects it with the foul-brood poison. 3. I should not want to use it, though I do not think any injury would be caused by so doing.—J. E. Pond.

1. Contagion. 2. No, it does not harm the honey for use, but if bees from a healthy colony should get the honey from a diseased colony the healthy colony would become diseased also. 3. Not unless the honey is extracted from the brood-nest. Several years ago, when my apiary was effected with the disease, I extracted the honey and melted the combs, and the honey was so thick with foul-brood matter that in pouring it it would adhere so closely together that it would pour out in a body.—A. B. Mason.

1. I do not know; and from what I have read on the subject, I do not believe that anybody else does. It is an infectious disease, as full of mystery as is cholera in hogs, chickens, etc. 2. No one who is not wholly indifferent as to what he swallows, would like to eat honey after it had been subjected to the foul odor accompanying a foul brood-chamber. 3. Of course it does. It would be a gross imposition to the consumer, and dangerous to the bee-keeping interest, to put infectious honey on the market.—G. W. Demaree.

1. The disease improperly called "foul-brood" is caused by *bacilli*, and it is contagious. 2. It should be boiled, and then may be used for feeding bees. 3. It is not suitable for table use, having been contaminated by the foul odor of the hive. It may be extracted and used for some kinds of manufacturing purposes, such as making printers' rollers. —The Editor.

THE HONEY-BEE: Its Natural History, Anatomy, and Physiology. By T. W. Cowan, editor of the *British Bee Journal*, illustrated with 72 figures and 136 illustrations. $1.00. For sale at this office.

The Bee and the Cricket.

GEORGE KENT.

A bee, one day, in arbor lay
Or rather was found humming;
Busy and blithe, taking her tithe
Of "anise, mint and cummin."

A cricket near was in high cheer,
Chirping in lively ditty;
To work as drudge he thought "all fudge,"
For toil he felt no pity.

'Twas Summer time, each in their prime,
One bent on mirth and pleasure;
Wise to provide, the other plied
Her task, for Winter's treasure.

The Summer's day had passed away,
And Autumn brought "Jack Frost;"
Each in their turn began to learn
Of time to count the cost.

The bee could show of cells a row
Of well-filled sweetest honey;
The cricket's song had brought along
No food, "for love or money."

The Winter came—for very shame,
The cricket was found dodging
In any nook where he could look
For miserable lodging.

The bee was hived, and joyous thrived,
In comfortable quarter;
Among her friends her Winter spends
In pleasure without barter.

Now, which think you, on sober view,
The wisest part has acted?
If you have doubt, don't find it out
As cricket poor in fact did.
—Little Pilgrim.

Topics of Interest.

My Experience with Fixed Frames.

BARNETT TAYLOR.

In 1861, I was thoroughly possessed with the idea of keeping bees in a more scientific way. I secured "Langstroth on the Honey-Bee," and studied it with great interest. Previous to that time, I had never seen a movable-frame hive, and I at once resolved to adopt them, but found no way of spacing the combs the proper distance apart, except the very slow and uncertain one of merely guessing; and, not being inclined to trust to chance in anything, I began experimenting to find some better way, and, as a result, invented the frame which I exhibited at Keokuk, last November.

In the hive I gave to Mrs. Harrison, the frame, you will remember, had wire nails driven into the ends of the top bar, and projecting ¾ of an inch. On each end of the hive there is a strip of tin projecting ¼ of an inch above the rabbet, with small notches, 1⅜ inches apart, cut in its edge, and in these the frames rested on the wire nails. Small wire staples in one end of the bottom of the hive holds them in place there.

All of my bees were kept in this kind of hive when used with full brood-chambers, until some eight years ago. I made thousands of them and they became common in this section of the country; and I believe they gave entire satisfaction to everyone who used them, and to-day, if I intended to use fixed frames, I would adopt them (after extensive experience with all the popular styles of fixed-distance frames in use) without one second's hesitation; but I have been using an improved rabbet, in connection with hanging frames, with a device showing just where to place each frame instantly, without, in any way, interfering with the functions of plain hanging frames. I have over 100 colonies in such hives now, and they give better satisfaction, all things considered, than any frame I ever used, and I shall try no further costly experiments, but use this kind of frame entirely in the future, unless something shall appear that is better than anything produced in the past.

To show that I have not reached this decision without a fair chance of arriving at reasonable conclusions, I will give my experience with other kinds of fixed frames, especially the Heddon and Hoffman (so-called). I made 100 hives with entire closed-end frames, placed in a suitable case, and when they were new and empty I handled the frames with the greatest pleasure; but when they were filled with a crowded colony of bees, and dampness had swelled the hives and frames, I found them, after three seasons of experience, so annoying to handle, as compared with my old frame, that I altered them all into hanging frames by taking off the ends, and adding new ends and top-bar.

But 4 or 5 years ago there commenced a great hubbub about the new famous Hoffman frame. (By the way, I had been using those half-closed-end frames in my little double brood-chamber hives for years before I ever heard of either Mr. Hoffman or his great invention, and as the frames in these hives are only 4½ inches deep, and scarcely ever handled singly, they answered very well, just as the Heddon frames do. But in the future I shall use a suspended frame in even these hives, as it has advantages over either.) As I was just starting out-apiaries, I thought I must have a hive especially adapted to hauling around, and 500 hives the size of my old hive, but with Hoffman frames, were constructed in the very best manner. After they were completed I spent hours in handling the frames in the empty hives, and I pronounced them "very good indeed." The out-apiaries were duly supplied with them, and every swarm was hived therein. But pretty soon Mr. D. W. Whitmore, who very successfully managed our Etna apiary complained that the "new frames were not near so nice to handle as the old wire-end ones." Mr. Whitmore is now managing bees for himself, and he said to me lately (after three years' experience with the Hoffman frame): "I want you to make me 50 hives in the flat, with the old wire-end frames, they beat the closed-end frames at every point; the old frames are the ones for me."

I used 50 of these hives in my home apiary, and after trying them three years the difficulties of handling frames in hives crowded with bees completely disgusted me, and I transferred the combs to hanging frames, and bid the Hoffman frame a respectful good-by.

I have tried several other styles of fixed frames, in a small way, but found none satisfactory.

Forestville, Minn., August 19, 1891.

Mental Life of the Honey-Bee.

DR. DONHOFF.

There are actions of animals which depend upon acquired ideas. Ideas are retained, as with men, of collective impressions. The retained ideas appear sharper, and more like mental impressions, than the ideas which are retained by men from mental impressions. If a hive stands among many of similar appearance, the bee returning from the field finds her own hive again. The bees that swarm retain the scent of the queen, that runs about freely in the hive, and collect around her.

I gave to a magpie, within half an hour, twelve coins and pieces of bread, which she hid in the most different places of the garden and field, and concealed with earth, or with a leaf and earth. Some places I marked by sticking in a bit of wood. On the next following days coins as well as pieces of bread, were gone.

The swallows, which migrate to Egypt, and sometimes to the neighborhood of the equator, come back again to the place where they were born. A farmer at Dinslaken, not far from Orsoy, has accustomed a nightingale to come into his room and eat at the table where he sits. Last year it returned again for the third time.

The animals could not come back again if there was not still, after a half-year, present to their minds the picture of the country, which impressed itself upon them on the home journey. The ideas of animals are associated, according to the same law of similarity as the ideas of men. The bee, which returns from the field and sees the hives, associates with one of them the picture and position of the hive which was impressed upon it at its first outward flight; it recognizes the identity between its idea and one of the hives which it sees, and thus is it enabled again to find its hive.

On the front of the hive I stuck some blue paper; fourteen days after I stuck yellow paper upon it. The bees returning from the field hesitated long before they settled, and at last they flew, not to the entrance, but mostly to places on the hive distant from it. The mental idea of the yellow hive, the idea of the blue hive presenting itself again to the consciousness, and the difference of these pictures, were causes of the hesitation.

If a hive is changed to another stand, the bee makes hovering flights by way of finding its bearings. The difference of the picture necessitates these flights for the purpose of noting its bearing. If a colony has swarmed, every bee makes, at its first outward flight, these bearing-noting hoverings, even if the swarm has been put in the place of the parent colony. There must, consequently, have been an idea of the act of swarming retained, which presented itself to the bee's consciousness at its outward flight. But there must be with the higher animals more complicated associations of ideas, which the bees do not possess. If a servant girl has been accustomed to feed the pigs, they get up when they hear the girl's footsteps, and hasten to the feeding-trough. This kind of an association appears to me to occur in all mammals and birds.

A colony of bees may be fed every evening, but the bees will never hasten to the feeding-trough when they see their owner coming. If a dog has had a beating, he runs away when he sees the stick taken up. I let bees fly in my room, caught them, and pressed them repeatedly, which is unpleasant to them; for if they are let loose, they run or fly away from it. But I could never notice that a bee flew away when I made motions with my fingers as though I would catch it.

But the thing in which animals are deficient is, as Johann Muller remarks, the faculty of forming conceptions. The bee is incapable of forming the idea of several ideas, of forming generalizations; it cannot form the conception of honey, it cannot, therefore, form a general idea; it cannot form the idea that honey is sweet; it does not apprehend the connection which exists between honey and sweet.

Because the essential connection between things escapes animals, their minds may harbor a world of individual ideas, but they cannot find the stationary pole in the series of phenomena, on that account are they so limited. If one of the higher animals has accidentally done something whereby advantage has been gained, it repeats this.

My magpie continually threw about some yellow, blue and red paper, which I had laid at the bottom of its cage. I several times concealed a bit of meat under the blue paper; when it threw about the blue paper again, it found the meat and ate it up eagerly. After it had found meat under the blue paper several times, and I again laid papers in the cage it only attended to the blue. Similarly I accustomed it to draw a piece of meat, which hung by a thread under the cage. But to form conclusions from the analysis of conceptions, to deduce actions that would be useful to it, of this it was just as incapable as any other animal. But there do occur acts of animals which do not depend on experience.

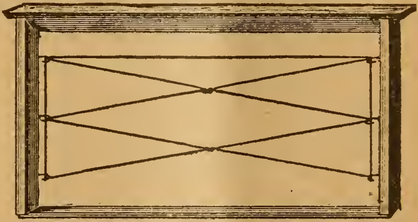
In these acts of instinct our bee stands higher than any other animal; it is the proper representative of instinct. Its remarkable household, with its labor, its comb construction—wonderful on account of the skill manifested, more wonderful because of the mathematical problem that is solved in it—have been from of old the admiration of men. I have been close to swallows and seen them build. I have seen the more remarkable web woven by spiders, but the thing that has charmed me most is the legerdemain-like skill with which a bee takes out a scale of wax from between the abdominal rings, and with which it attaches the particles when duly kneaded.

Who has not been touched by the marvelous nature-rule which impels a bee to make way for her queen, when she walks over the comb to lay her eggs? The man who can stand before the mysterious powers which hand to one another here their golden flagons, without being inspired by a feeling—I might say a sacred feeling—of reverence, must be a Philistine.

Bee-Keeping in Central Missouri.

C. L. BUCKMASTER.

Last year I had three colonies of black and hybrid bees (which cost me $7.50), and they increased to six, but one colony had no queen, and they died before Winter. These were in different kinds of hives, so I could do nothing to help them. Four came through the Winter all right, and the other one had the fewest number of bees—if I should say a handful I am sure I would say too many. I have made a good colony of this small affair by giving them two frames of brood.



This Spring I bought 16 colonies, in box-hives, for $1 each, and 1 colony was given to me, making 22 colonies altogether. I transferred them to 8-frame Langstroth hives, and used the old boxes for wood. This was a big job, and I think prevented the bees from swarming, for I had only a few swarms. I now have 28 colonies in good condition, and have taken about 300 pounds of extracted-honey, and I think I can take 200 pounds more in a few days. I would have a nice lot of comb-honey if my supers had not been delayed so long. I have made 50 hives and the furniture for them, and did all the transferring myself.

I now have the whole theory of bee-keeping, and have had some of the practice. I have learned that bees need no cellar in this climate; that black bees store honey in the sections much the prettiest, but the honey will not sell for any more than that stored by the Italians.

I am going to Italianize some colonies this Fall, and the remainder next Spring. I am making artificial swarms with frames of brood and young bees, to put my new Italian queens with. If I do not lose any this Winter, I shall have 30 colonies to begin with next Spring.

I have learned a way to wire a brood-frame, which I think beats the old method. I learned by having several whole sheets of foundation pulled out by the weight of the bees. I put three nails in each end and use a little more wire. The top wire I pull down a little so that the foundation is held firm in the groove, and the other wires keep it from folding. I can hive a large swarm on foundation wired this way, and have no trouble, and this, I think, is a great saving, for foundation costs money.

Columbia, Mo., Aug. 11, 1891.

Apicultural Notes from Alabama.

ED. CLARK.

Bees are not gathering much honey here now. The season has not been as good as I expected.

Sourwood did not yield much nectar this season.

Sumac is in bloom, but we have had too much rain for it to yield any amount of nectar; as the weather has cleared up, however, I expect to secure some honey from it yet.

There has been a great deal of honey-dew this season—so much so that it dripped from the leaves of the trees. It is light-colored and tastes almost as well as any honey.

The honey-flow from poplar and huckleberry was abundant, but my bees were too weak to get the full benefit of it. The poplar is a grand honey producer, but unfortunately for bee-keepers, the greater part of it has been cut down, in this section. There was a great deal of poplar on the sides of our mountains, which was sold for $1 per tree, and less. If the owners of the land upon which it grew, had the honey they migt have procured from the poplar trees, it would be worth much more than the price they received for the timber.

I had 3 weak colonies in the Spring, and have increased them to 8. I secured 3 colonies from the woods, but one of them is in the woods now. When I found the colony that returned to the woods, I had nothing to put them in except an old "gum." I put them in the gum, and they remained until the next day, when they swarmed, and settled on a grapevine near by. I returned them to the gum, and they seemed contented, and built several small pieces of comb, but after a few days they left the gum and went to a hollow chestnut tree near by, and I shall allow them to stay there until Spring.

Nat, Ala.

Some New Bee-Escapes.

C. H. DIBBERN.

Ever since I invented the horizontal, removable bee-escape, in 1887, I have been trying to improve and cheapen it. In my long series of experiments, I have been greatly aided by the fact that I own a tin shop, and can do ordinary tinner's work. I would get an idea into my head, and straightway make a device to carry it out, and perhaps before night I would be testing it on the hives; in this way I have tried many things, and now have about a half dozen patterns that work all right. Of these I have selected two, the "New Dibbern" and the "Little Giant," that I am now offering for sale.

In the New Dibbern I have an entirely original bee-escape; there is not a single point or principle copied from others—which cannot be said of any other escape. The cut in the advertisement gives a very fair idea of it.

Bees in passing out, need not travel over four inches, through plain passageways, which they will do much more readily than where obstructions, such as springs or trap-doors, are used. I thoroughly tested it in actual use on crowded hives, and have actually forced the bees to lie out while the supers were entirely clear of bees.

All parts of the escape can be seen from the top, and should any clogging ever occur, the escape can be readily cleaned, by removing the center strip, and springing up the wire-cloth, or removing it entirely. There are no delicate springs, or other traps, to get out of fix, and with care it will last a lifetime.

There is no patent on the escape, nor is there any intention of patenting it. Of course, they are free to all, and any one may make them—if they can do so cheaper than I. I trust, however, that bee-keepers generally will give me the preference over others, who may commence making them. Full directions accompany every escape, which give some new and valuable suggestions.

THE "LITTLE GIANT" BEE-ESCAPE.

In my efforts to give the fraternity a perfect escape, I have not confined myself to what some have called the "labyrinth" system, but have tried, long ago, what could be done with springs, traps, etc. I succeeded in producing one escape, on the flood-gate principle, that has pleased me greatly. I have succeeded in producing a little escape only 1¼x4 inches, that has stood every test. The little gates are made of broom-wire, and are provided with a peculiar device to prevent the bees propolizing the hinges.

The great advantage in this escape, is that 4 or 5 bees can pass out at once, and none can get back. This is a much more rapid escape than where only one bee can squeeze out at a time, between springs. Should any propolizing ever occur, the escape can be readily cleaned by putting it into boiling water.

These escapes ventilate the super, by means of wire-cloth directly under the large hole. This not only provides ventilation but serves to *draw* the bees to escape. This feature is entirely my own, and is not found in any other escape.

I have now fulfilled my promise to give to bee-keepers a perfect bee-escape—in fact, I now give them two. I ask, in return, only for a preference in the trade over other manufacturers, to repay me for my efforts.

Some men seem to think that I deserve only ridicule, and abuse, but I care very little for the opinion of such. If I have given bee-keepers a valuable invention, as I fully believe I have, I am thoroughly satisfied.

Milan, Ills.

Prevention of Increase by Swarming.

W. P. FAYLOR.

Where the apiarist has all the bees he or she may desire, and wishes to work the bees for honey, the preventing of increase by natural swarming becomes an important item to be considered. How vexing to the bee-keeper it is that when his bees are wanted to gather honey during a good honey-flow, they spend their leisure hours swarming or preparing to swarm.

A great many inquiries come to hand for some method to prevent swarming. It is generally urged that plenty of room for the bees to enlarge and spread, or widen their borders, will have a good effect against the swarming impulse. Room, and plenty of room, is not the chief requisite to forestall natural increase. Cutting out queen-cells is another means usually resorted to. This, in most cases, has the desired effect if gone over the second time. If the swarming impulse is defeated till the bees get to storing in the surplus receptacles, swarming will usually be over for the season. Raising the brood-chamber ¼ of an inch from the bottom-board, so as to allow a free circulation of air will have a better effect than any one thing the apiarist can do besides, to prevent swarming.

As soon as I notice a brood-chamber becoming pretty well filled with bees, I place a little strip of lath under each corner of the brood-chamber, raising the hive the thickness of a lath all around from the bottom-board. In nine cases out of ten where this is resorted to, it will not even be necessary to cut out queen-cells. Raising the brood so as to let the air go whistling underneath the brood-frames, will always hasten the bees up into the sections, or upper story.

I have had but two natural swarms during the last ten years, and none for the last three years. The more we keep our bees from swarming the less will they be inclined to swarm in the future. The instinct of the bee can certainly be improved.

State Line, Ind.

Apicultural Items from Minnesota.

C. THEILMANN.

As the time has advanced far enough, even in this northern climate, most bee-keepers are looking for reports concerning the honey crop.

Bees in this vicinity, on the whole, wintered poorly, and many colonies dwindled in the Spring, while the cold weather kept back those which were not very strong, until midsummer.

The outlook in June, for a big honey crop was never better. Clover and linden could not have looked any better than they did about June 20, and the bees had filled their combs all around the brood-chamber nicely with honey, and began work in the sections, as white clover was in full bloom; but the nights became very cold and the bees could only work by hours, and half days.

On July 4 the linden blossoms opened, and lasted until July 19. The trees were covered with blooms, but the unfavorable weather continued until the bloom faded. My bees could work only 3 full days while the linden bloom lasted, and since then, up to date, the bees have not gathered honey enough for their own consumption, and have consumed considerable of the honey from the outside combs.

The weather has been very dry for the past 6 or 7 weeks; many of the honey-producing plants have dried up, and as far as I can learn there is no prospect for Fall honey, and my information comes from nearly all parts of the State, except north and northwest from St. Paul.

The average yield, per colony, Spring count, is from 10 to 30 pounds, all white honey, of good quality. I had 200 colonies in the Spring, and obtained a little over 6,000 pounds, but not all bee-keepers in this part of the State were so fortunate. I have not heard of any who secured over 25 pounds of surplus per colony, and the honey crop is only about one-fourth of an average.

The market at St. Paul and Minneapolis is glutted with honey, with but little demand, as yet. Some of our bee-keepers are sending honey to those markets and selling it for whatever they can get, when they could get a great deal more for it at home.

There were light frosts last night, and the night before.

Theilmanton, Minn., Aug. 24, 1891.

Rock River, Ills., Convention.

J. M. BURTCH.

The semi-annual meeting of the Rock River Bee-Keepers' Association met in the parlors of the Randolph House, at Sterling, Ills., on Thursday, August 6.

Members were present from Prophetstown, Lyndon, Dixon, Coloma, Clyde, Morrison and Sterling, representing about 1,000 colonies. Among the many questions discussed pertaining to apiculture were the following:

"What effect will honey-dew have on bees for Winter stores?"

"Is it best to use wired frames or not?"

"Full sheets of foundation or starters in brood frames?"

"Will it not pay to make all poor honey into vinegar?"

"Starters or full sheets of foundation in sections?"

"Does not the use of separators lessen the proportion of partially filled sections at end of season?"

"Would it not be for the interest of every bee-keeper to join the Bee-Keepers' Union?"

An excellent dinner was served at noon, to which nearly all present paid their respects.

An enjoyable time was had, the only regret being that there were not more of the bee-keeping fraternity present to enjoy the festivities of the occasion, "the feast of reason and the flow of soul."

The next annual meeting will be held at Sterling, Ills., Dec. 3, and it is hoped that all bee-keepers in the territory embraced by the association will avail themselves of the privilege of being present.

As train time (four o'clock) was approaching, the association reluctantly adjourned, the members going their several ways, feeling that it was good to have been there, and expressing thanks to "mine hostess" of the Randolph House for her kind treatment.

Morrison, Ills.

Fence in the Apiaries.

MRS. L. HARRISON.

While it is possible to keep bees in closely populated districts without their becoming a nuisance, there are but few persons who are so constituted as to be able to engage in it with impunity. If colonies were never disturbed, they might not annoy near neighbors, but when honey is extracted, or sections removed during a dearth of honey, great care should be exercised.

A bee-keeper of this city, who is located on a city lot of little more than fifty feet in width, has been buying bees as opportunity offered, and was ambitious of increasing his colonies to the number of 150. He called lately to compare notes, and gave a bit of his experience, which I will now relate for the benefit of others similarly situated. Variety is the spice of life, and bee-keepers have been accused of only giving the bright side of this pursuit.

He said: "I had been working with my bees, and I noticed that the fuel in the smoker had nearly all burned out, so I picked up a rag that I saw and put it in and as it burned I puffed away at some bees that were lying out and drove them into their hive.

"In an instant the air was full of robber bees, pouring into the hive where I had driven in the outlying bees, and along with them their guards. I wet a cloth in kerosene and spread it over the hive and poured on carbolic acid. The bees were stinging everything within reach—the family, chickens and pigeons. I finally exchanged hives, putting the robbed colony in the place of the robbers, and got stung fearfully while moving them. This exchange stopped the robbing, but the bees popped against the glass of the windows trying to get into the house, and watched the doors for some person coming out whom they might sting. They kept this up the following day.

"I had planted a row of sunflowers along the division fence between me and a neighbor on one side, and the bees did not disturb them, but the family adjoining me on the other side were molested. I can account for this affair in no other way than this: The cloth that I put into the smoker had been over the bees, and I noticed that it had wax and propolis on it; and it was the smell of its burning that set the bees to robbing so furiously.

"Instead of my wanting 150 colonies of bees on my lot, I would like to sell half of the 20 I now have, or send them into the country on shares."

This man has learned a lesson that he will never forget, and we may also profit by it. The value of a screen around an apiary, such as a high board fence, hedge, trees planted closely, or rows of sunflowers is shown. The bees did not sting anything across the row of sunflowers, and if they flew that way they aimed high and went up out of the way of temptation. If an apiary is inclosed with some such screens, the bees appear to think that they need only to defend the inclosure; that that is their home.

Weedy cornfields are the prospect for Fall honey in many localities. A species of polygonum, commonly known as blackheart, is very rank, owing to frequent showers, and is perfectly at home in many fields.

I heard lately of a honey-plant that is new to me, growing in the moist lands of the Illinois River bottom, where there are acres of it humming with bees gathering loads of both honey and pollen. It is commonly known as American yellowtop, and from the description given it is a variety of wild mustard.

City Boy—"I smell honey."
Bee-Keeper—"You will smell something warmer than honey if you don't get out of there pretty quick."

MARKETING HONEY.

Those who have been so fortunate as to secure white clover or basswood honey, should be in no hurry to market it, as from all data obtained the crop will be light.

Very white comb, filled with dark honey gathered from honey-dew, is now offered for sale in this market. A groceryman who has purchased a crate of such honey, says that he sold two pounds of it to a customer, and she gave him a blowing up for selling her such stuff. It should not be put upon the market, for it will injure the sale of a better article. It should be kept at home and used for

Spring feeding of bees. It may not be good Winter food, but when bees can fly, will do no harm.—*Prairie Farmer.*

Peoria, Ill.

History of Bee-Escapes.

G. W. DEMAREE.

A friend of mine has suggested that an article from my pen, on the history of bee-escapes, would be read with interest, now, since the device has been made a practical help in the apiary. There is some responsibility attached to such an undertaking, because of the difficulty the historian finds in the way of doing justice to all.

The first hint we have of a "bee-escape" in our nomenclature was printed on a device to permit bees to escape from a dark closet and prevent them from returning to carry away the honey. This device was invented by the writer of this article and exhibited by him at the National Convention, at Lexington, Ky., in 1881. Mention is made of this device in the report of the Committee on Exhibits, as may be seen by referring to the report of the proceedings of the Convention as given in the AMERICAN BEE JOURNAL of that year.

The concern was made of wood and glass and was in the form of a V and had a spring at the apex for the bees to "escape." Afterward I substituted the wire cone; and in 1887 I began to experiment with an entirely new principle. This new principle consisted of a delicately adjusted trap-door, or swinging gate, in what I call a *chute.* This tiny swinging gate was so finely adjusted in the passageway or *chute* that the slightest touch from the inside would swing the under part of the trap-door outward and let the bees "escape," but when pressure was brought to bear from without, a "stop" at the bottom of the *chute* prevented the door from swinging inwardly and no bee could force her way back.

When I was experimenting with this tiny swinging trap-door, Mr. J. S. Reese, of Winchester, Ky., sent me his wire-cloth device applied to a horizontal division-board. Thus he became the first to apply the bee-escape to a honey-board, and is now the accepted father of the present, practical bee-escape—one of the greatest helps known to modern bee culture.

With this new idea I revised my tiny trap-door plan, and having adjusted it in a small tin *chute*, so as to fit it in a honey-board, it became a perfect success.

While Reese and Dibbern were working to perfect their labyrinthine plan, I was hopeful that they would succeed, till experience taught me that nothing but *mechanical force* would prevent bees from returning in numbers sufficient to annoy the apiarist. Now, it seems a little singular, but the facts appear to warrant the conclusion, that Mr. Porter was at the same time experimenting with his delicately adjusted spring device, which he has patented, and therefore brought into general notice.

Some friend sent me two of Porter's escapes and I immediately adjusted them in suitably made honey-boards and have given them the severest trial, right beside my swinging-door device, and I have no hesitation in saying that noth-can be more simple, and few devices will ever be more efficient in performance than the trembling little springs which constitute the Porter bee-escape. But it is my opinion it will meet a rival in the subtle, swinging trap-door, when I have procured machinery that will make the little gates perfect.

Now, in conclusion, I have to say that from the Reese labyrinthine idea, the bee-escapes of to-day, and of the future are, and will be, a progression of ideas. —*Review.*

Christiansburg, Ky.

Three Sounds Made by Bees.

DR. C. C. MILLER.

On page 142, Prof. Leader says: "It has been found that the wings have no part in the formation of sound." This is not in accord with the teachings of other investigators. Indeed, Prof. Leader himself, in the very next sentence, unwittingly contradicts his own statement, for he says that when the wing is more or less cut away there is a different *pitch* of the sound. Now, pitch is a very important part of a sound, for when you take away the pitch there is no sound left; in other words, there is no sound without pitch. So if the wings take part in the formation of pitch, then they have a "part in the formation of sound."

What he probably meant was, that while the wings might modify the pitch of a sound, they were not the main factors in making the sound. But even this ground is untennable, according to high authorities; at least, it is only part of the truth.

Cowan and Cheshire agree in their statements, the former quoting such authorities as Charbrier, Burmeister, Landois and Marey. According to these writers, although the vocal apparatus spoken of by Prof. Leader makes a sound, there are two other sources of sound, and consequently three kinds of sounds. The first, buzzing is made by the vibration of the wings; the second, much sharper, by the vibration of the abdominal rings; and the third, humming, the most acute and intense, by the action of a true vocal apparatus, placed in the stigmatic orifice.

Marengo, Ill.

Bees, Poultry and Horticulture.

MRS. S. E. SHERMAN.

We are here at our annual convention, to consider what pertains to the best interests of our pursuit.

I, as a member of this society, am here under protest, for my bees and poultry at home are calling loudly for my aid, assistance and fostering care. But it is for them I am here, to plead their cause and to place them upon a proper footing, and to show you that they are a necessary adjunct to successful horticulture. I now say, without fear of successful contradiction, that the possibilities in bee-keeping and poultry-raising have not yet been reached.

Need I say less of horticulture? The true horticulturist and fancier, like the bee-keeper, is an enthusiast. I need not remind any who plant trees and grow fruits of the genuine pleasure that thrills his soul when nature responds to his intelligence, thought and careful directions. He lives in a world all his own. He needs no other intoxicant to complete his happiness.

Horticulture is one of the fine arts; it requires the skill of a master; but after all his skill in planting, after ransacking the earth for improved varieties, after propagating, grafting and hybridizing, he must rely mainly on nature's methods of fructification. The favoring winds and industrious bees are needed to fertilize the bloom to insure a harvest of fruit. As a means of accomplishing this end, there is no question but that the bee is of great service to the grower of fruits; no other insect is multiplied in such vast numbers so early in the Spring, when their agency is so much needed to fertilize the orchards and small fruits.

If the winds were the only means of carrying the pollen from flower to flower, how often would perfect fertilization fail from too much or too little wind, during the brief time when the bursting buds are sighing for the life-giving dust from the neighboring flowers.

Not only is honey provided in the delicate chalices to entice them, but the pollen so essential to the plant (and just as essential to the bee in furnishing the proper food for its young), is placed in close proximity to the nectar, so that in getting either it is unwittingly carrying the dust from flower to flower, working out the wise plans of Providence as relates to plants, and catering to man's pleasurable taste at the same time.

The drop of honey is placed, then, in the flower, not because it is needed in the flower or fruit, but to tempt the bee to brush its hairy legs against the anthers and distribute the golden dust. So the bee introduces itself at once to the horticulturist as his friend. The latter ought to meet it half way and acknowledge its two-fold service. It does him a service while on its daily rounds in search of food for itself and young, and again by storing up for his benefit the liquid sweets which it does not need itself, and which, ungathered, vanish like the morning dew, like the manna which the Israelites ate of. The ungathered portions melted "when the sun waxed hot."

What, then, is there to hinder these three vocations from going hand in hand, since each is helpful to the other. Each furnish inducements for the other to exist. These pursuits once entered upon, possess charms of their own. No other stimulus is needed to follow them than the fascinations of their own creation.

But comparatively few people know the value of the bee to the various branches of horticulture. Many look upon them as a simple machine for the gathering of honey, by which means the human taste is gratified. But in truth the bee is almost as much a part of choice fruit and beautiful flowers as the branches upon which they grow. The flower, with its honey, and the bees are actors in one of nature's most beautiful and interesting problems, and through the intricate workings of this problem are born the brightest colors, finest perfumes, and richest flowers.

Countless flowers are fertilized by the bee which would otherwise perish from the earth. When there are no bees, fruits and flowers show the effect of a violation of the law of nature by slowly but surely degenerating. The bee is as necessary to the flower as the flower to the bee; in conjunction a harmony is produced which results in more brilliant colors, in sweeter flavors and perfumes to regale the senses of man.

In fructifying the various flowers, bees act as nature's marriage priests and present us with a field of study as boundless as the gorgeous realm of nature's bloom. But for the oft-repeated visits of the bees, many a beautiful flower would in a short time cease to bloom—aye, and also to live. Many plants absolutely require the visit of bees or other insects to remove the pollen mass and thus to fertilize them. Hence, Darwin wisely remarks when speaking of clover and heart's-ease, "no bees, no seed; no seed, no increase of the flower." The more visits from the bees the more seed from the flowers; the more flowers from the seed.

Darwin mentions the following experiment: "Twenty heads of white clover visited by bees produced 2,990 seeds; while 20 heads so protected that bees could not visit them produced not one seed." This is certainly conclusive evidence, and ought to convince the most skeptical. Then, once more allow me to urge the necessity of keeping and intelligently caring for the wants of our friends—the horticulturist's best friends—the bees.

Poultry is also a very necessary adjunct to successful horticulture. They destroy many insects that are very injurious to our fruit, fruit trees, shrubs and plants, and at the same time enrich the soil instead of impoverishing it.

Get some fine breed of fowls instead of mongrels, for they are far superior both in egg production and for culinary purposes (of course I would suggest the Houdan as they are my favorites), and let them have free access to the orchard. They will more than pay for the care and time thus bestowed on them in furnishing our tables with nice fresh eggs and delicious broilers, to say nothing of the great advantage that they will be in destroying injurious insects, thus giving us more and better fruit.

I do not think that poultry is fully appreciated. Many begrudge them what they eat, never thinking of the wonderful amount of good they do by destroying poisonous and otherwise injurious insects. My husband and I saw a hen catch, kill and eat a very large centipede that was within a few feet of our only little boy, who was just running around. We were both horrified at the thought of what the consequences might have been had it not been for that hen.

So I will enter a plea for poultry in general, and for Houdans in particular. They are so docile, so hardy and thrifty, such fine layers and the very best table fowl it has been my good fortune to sample. In conclusion, let me urge the three pursuits combined as being especially adapted to each other; let the verdict be that bee and poultry-raising combined are necessary adjuncts to successful horticulture.—*Read before the Texas Horticultural Society.*

Salado, Tex.

Where to Keep Comb-Honey.

J. L. BOWERS.

Do not, on any account, store honey in a cellar. The dampness causes it to sweat, and then the cappings will break and you have a lot of ruined honey.

Our honey room is in the second story of our house, and will hold two tons. It is 6x10 feet, and nine feet high, with two doors—one on each side—one opening from the hall; the other opening into a room over the porch. This room has one window. Here we put our honey first to let it harden, keeping this room light.

After exposing it to the light for about two weeks, we place it in the honey room. Never on any account, place more than two boxes on top of one another, but place shelves above each other on the order of a library.

If little red ants bother honey, place the honey on a bench and put each leg or foot in a pan of water, and my word for it, if you keep water in the pans no ants will bother the honey. Our honey room is as dark as anything can be made to be.—*Maryland Farmer.*

Convention Notices.

☞ A meeting of the Illinois State Bee-Keepers' Association will be held at the fair grounds of the Sangamon Fair Association, Springfield, Ills., on Tuesday, Sept. 9, 1891, at 1 p.m., at the office of the President of the Board. The object of the meeting, among other things, will be to formulate a programme for our regular meeting. It is of the utmost importance that the programme prepared at this meeting should embrace our best talent, as it will furnish the material for the Report which the State has made provision for publishing.

By order of the Executive Committee.
JAMES A. STONE, Sec., Bradfordton, Ills.

☞ The Ionia Bee-Keepers' Association will hold its next meeting on Tuesday, Sept. 15, 1891, at Ionia, Mich. HARMON SMITH, Sec., Ionia, Mich.

☞ The Central Michigan Bee-Keepers' Association will hold their next meeting at Pioneer Rooms, Capitol Building, Lansing, Mich., Wednesday, Sept. 16, 1891, commencing at 9 a.m. A cordial invitation is extended to all.

W. A. BARNES, Sec., Lansing, Mich.

☞ The Southwestern Wisconsin Bee-Keepers' Association will hold its next meeting on Wednesday and Thursday, Oct. 14 and 15, 1891, at Fennimore, Grant Co., Wis.

BENJ. E. RICE, Sec., Boscobel, Wis.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Sept. 3.—Susquehanna County, at So. Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

Sept 9.—State Association, at the Fair Grounds, Springfield, Ills.
Jas. A. Stone, Sec., Bradfordton, Ills.

Sept. 15.—Ionia, at Ionia, Mich.
Harmon Smith, Sec., Ionia, Mich.

Sept. 16.—Central Michigan, at Lansing, Mich.
W. A. Barnes, Sec., Lansing, Mich.

Oct. 14, 15.—S. W. Wisconsin, at Fennimore, Wis.
Benj. E. Rice, Sec., Boscobel, Wis.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

North American Bee-Keepers' Association

President—P. H. Elwood....Starkville, N. Y.
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y and Manager—T. G. Newman, Chicago.

Bee and Honey Gossip.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Keeping the Bees Pure.

A few of your readers may think that I rear, and have fertilized in the same apiary, several races of bees. This is not so! I have three queen-rearing apiaries. The Golden Carniolan apiary is about two miles east of the home apiary; and west from the home apiary I have about 100 nuclei for Italian queens, and about the same number in the home apiary. The latter are used for Italians. Now that I have commenced to rear Punic queens, all the nuclei in the Italian apiary will be taken home, and replaced by the Punic nuclei.

Wenham, Mass. Henry Alley.

On the Bright Side.

I have harvested a nice lot of honey, as there has been an almost continuous flow of honey in this locality all Summer, but since white clover ceased to bloom the flow was not heavy enough for the bees to store any surplus, although enough to keep the queens laying briskly, and prevent the bees killing the drones, consequently the hives are overflowing with young bees. Brood-rearing has been so rapid that one colony with a young Italian queen—a second swarm at that—cast one of the largest swarms this month that I have had this Summer. I examined my bees closely, the day before yesterday, and found that they were ready to enter the sections—in fact some had already begun storing honey in the sections. The honey-flow at present is from golden-rod and cotton, and the bees are in fine condition for the Fall honey-flow from the aster, which always yields a large quantity of nectar.

John D. A. Fisher.

Faith, N. C., Aug. 24, 1891.

Not Much Basswood Honey.

Last Spring I had 26 colonies, which increased to 48. After casting the first swarm, inside of eight days they would swarm again; but I headed them off on that by cutting out the queen-cells. My honey is of a reddish cast, but some of it is not as dark as some honey I have seen. I would rather not have any honey-dew, so-called. I have sold some honey, and all who have said anything about it, say it is boss honey, so far as flavor is concerned. I do not know just how much honey I will have, but I have taken about 300 pounds, and have about 200 pounds that is not capped over. If we get no Fall honey-flow it looks like it would not be capped. Bees have only made a living since basswood bloom, and there was not much of that. The weather was cool all through the month of July, but we have had some good showers, which will help corn and start Fall flowers, so that we may get a little honey-flow yet. Ira Adamson.

Winchester, Ind.

Took First Premium.

Bee-culture has become quite popular and profitable in our town and vicinity. Many of our bee-keepers are getting from 50 to 75 pounds of comb-honey per colony. There has been but little swarming this season. I have 6 colonies, each of which have stored 50 pounds of comb-honey—all nice, clean white honey, and all the sections nearly ready to take off the third time. The prospects for a Fall crop are good. We expect from the golden-rod, which is just coming into bloom, a "golden harvest" of the best quality of honey. The Italian bee and the Langstroth hive are the favorites here. I find bee-culture exceedingly interesting, and spend many pleasant hours in that retired portion of the garden where my village of bee-hives is located. The American Bee Journal has become indispensable, and I attribute my success greatly to its assistance. Just here my wife suggests that it will be quite appropos to mention that she took the first premium at our county fair, last week, for comb-honey—for the thickest and best filled cells—and the second premium for extracted-honey.

James R. Ogan.

Tipton, Ind., Aug. 25, 1891.

◆

A Correction.

I wish to make a correction. In my letter, on page 149, the next to the last sentence, where it reads, "but only 2 of the queens were alive, the other 4 having been destroyed by the carelessness of the express company," I should have said that "four pounds of the bees, with their queens, were destroyed by the carelessness of the express company, and they were replaced by Messrs. Colwick & Colwick."

John Sundermann.

Huntington, Ind.

[The error was caused by the vagueness of the language used in the original letter. Such errors as the above may be avoided by the exercise of a little care on the part of correspondents, to make their statements plain and concise, leaving nothing to be inferred.—Ed.]

◆

Grubb's Patent (?) Frame.

I never used the so-called Grubb's patent (?) frame, but saw it in use in the apiary of a man by the name of Stevens, near Sioux City, Iowa, in 1881. I was informed by Mr. Stevens that the device had been in use for several years.

Monroe, Iowa. J. A. Nash.

◆

Poorest in Five Years.

This is the poorest honey crop that we have had in five years. I had 54 colonies of bees, Spring count, and they increased to 75, but they have not stored 5 pounds of surplus per colony, though there was white and red clover in abundance. The prospects are very poor for a Fall crop. What is the matter?

Anderson Hyer.

Washington C. H., Ohio.

Better than Last Year.

I send you to-day a view of my apiary, which numbers 42 colonies. I observe that 5 colonies are omitted from the view. This has been a poor season here, although somewhat better than last year. What honey we have is of better quality than last year's crop, and I am living in hopes of securing a Fall crop. We had a splendid rain last night, and all we want now is warm weather. Please accept this view, if you have room in your album.

G. W. Logan.

Elwood, Iowa, Aug. 11, 1891.

[The view is placed in our office album, with thanks.—Ed.]

◆

White Clover a Failure.

Bees in this locality have done very little this season. Basswood yielded moderately well, but the honey was mixed with "bug-juice." White clover proved a failure, but buck-brush yielded some nectar. Owing to the wet season, Spanish-needle and smartweed are growing luxuriantly, and beginning to bloom, but whether they will afford any nectar, remains to be seen. However, they are our last hope.

John Doty..

Galt, Mo., Aug. 25, 1891.

◆

Prospects for Fall Honey.

There was no white clover honey in this locality. There is, however, an excellent prospect for a good crop of honey from Fall flowers.

John Q. Hill.

Prophetstown, Ills., Aug. 17, 1891.

◆

Albino Bees.

In response to an inquiry by Mr. I. F. Diamond, page 216, "Are the Albinos as hardy as the Italians, *i. e.* do they Winter as well?" I can say that the so-called Albino bees are a type distinguished by three yellow bands (Italian) and white rings below, and white thorax, with purple about the eyes. Mr. D. A. Pike, of Smithburg, Md., was the first who called attention to the white developed on the progeny of an Italian queen, in 1874. Prior to this, white markings had occasionally been noticed here and there among Italians, and Gen. Adiar applied the name Albino to the white Italians. Years ago I had fine Albino queens of Mr. Pike, Mr. Valentine and Mr. Taylor, and I got a fine Albino queen of Mr. Pike last May. I had experience with the Italian type and the Albino, and I vouch for the Albinos being equal in all respects to the common Italians. I have proved that the true Ligurian; or Italian Alps bees, are quite superior in point of being "hardy," and endure Winter better than any other variety of yellow marked bees. I tested the Alps bees during four years, and this season I concluded to import the Ligurian variety. My first attempt failed, but I ordered more queens. They do stand the stern Winters more successfully than bees bred in less rigorous climates, and they are less pugnacious than bees bred in warm and temperate climates.

Richford, N. Y. C. J. Robinson.

Taylor's Swarm-Catcher.

Will Mr. B. Taylor please give us a little more definite description of how the small end of his swarm-catcher is made? The illustrations in the American Bee Journal, and in the *Review*, together with his description, make it all plain excepting the end that fits up to the hive. He says that the small end is made of a strip of carpet 3 inches wide by 16 inches long, but he evidently does not mean that. The small end, he says, is 4x16 inches, and after the swarm is in, it is closed by a thin strip of board 3½x16 inches—why is the board ½ inch narrower than the end of the catcher? His description makes the catcher the same width as the end of the hive, but the illustration shows it to be wider than the end of the hive, and neither one makes it plain to me how it fits into the right angle formed by the end of the hive and the alighting-board, so as to be bee-tight. I feel sure that his catcher is a good thing, and I presume that a few words of explanation by Mr. Taylor would make the small end as plain as the large one.

Plainwell, Mich. W. E. Forbes.

Light Crop.

White clover was quite plentiful this year, but yielded very little nectar. Basswood was a total failure, and the flow from buckwheat was only fair. The average crop will be about 10 pounds of comb-honey per colony. My bees cast their first swarm to-day, Aug. 25. The hives are not large enough to hold the crowded masses of bees, and it looks as though I would have to build an addition to hold them.

Aristotle, N. Y. H. C. Farnum.

Requisites of a Good Smoker.

I do not like to find fault with others, but how the older apiarists have put up with the Bingham smoker for eleven years in its present shape, is more than I can understand. Why, I had not looked at mine more than 15 minutes before I voted it old fogy. Why don't he make a hole, with a slide, just above the grate when in place, so that it can be filled with whatever is desired to burn, placing a few fine shavings in the bottom, and when wanted for use open the slide and stick a lighted match in and it is off in an instant. This building a fire outside, and then putting it in the stove is too much like the man snuffing the candle with his fingers, and then putting the snuff in the snuffers, and extolling their merits. J. E. Prichard.

Port Norris, N. J.

[We requested Mr. Bingham to reply to the above and this is what he writes:

Such a slide would weaken the smoker, get out of order, leak smoke and add to the expense. Had he thought and looked ten minutes longer, he could have answered his own query in several ways. Probably no instrument used in an apiary has received more attention, with a view to its betterment, than the Bingham smoker; but, like the Langstroth frames, it has practically met the wants of bee-keepers in every country and condition. —T. F. Bingham.]

☞ Sunday School Teacher—"And now, children, who have we to thank for the beautiful sunshine, and, more than all, the health-giving rains with which we are blessed?" Texas Class (in unison)—"Uncle Jerry Rusk!"—*Denver Sun.*

Removal. — Circumstances have made it to our advantage to remove to more commodious quarters, and we may hereafter be found at 199, 201 and 203 East Randolph Street—two blocks north and one block east of our former location. Previous to removal we occupied the fifth floor of a building, but we now occupy the *third* floor of a building near the corner of Fifth Avenue and Randolph Street. Our friends are always welcome.

Wavelets of News.

Planting for Honey.

I think our experiments have shown that special planting for bees is not advisable. If a plant can be found that will surely grow, will secrete nectar in all weather, will self-sow, and hold its own against weeds, etc., and needs no cultivation, such a plant might pay just for honey. Is there such a plant?

We have tried experiments this season that show most conclusively that bees are a blessing to the farmer and fruit-grower. These latter should either keep bees or else beg the bee-keeper to come. I am sure all will be interested in experiments that prove beyond peradventure that bees are very essential in nature's economy.—A. J. COOK, in *Gleanings*.

Robbing.

The trouble of robbing always arises at the close of the honey season. Take precautions in this matter and do not leave honey carelessly lying around. Do not have hives open, or cracks and crevices in the surplus stories; bees always find such and nothing of the kind escapes their notice. Robbing is often started by the apiarist's removal of surplus honey about the close of the season. This should not be done at any time during the day, but late in the evening; or what is better, make a bee "tent" from gauze or fly netting, and place this over the hive before opening it; thus all will be safe. This tent is an indispensable article, and one or more should be in every apiary. When a hive of bees is being robbed this should be set over it. There is nothing better to prevent robbing.—A. H., in *National Stockman*.

Look Out for Details.

Do not neglect the bees, though no surplus is being gathered. Extra strong colonies, if they should by accident become queenless, will dwindle rapidly and fall prey to robbers and the moth.

Comb-honey that is marketable should not be allowed to remain on the hive; it will become travel-stained, and additional wax and propolis will be added to the cappings, thus ruining its beauty and taste.

All scraps of comb, cappings from the extractor, etc., should be gathered up and melted into wax for the sake of economy and for the sake of preventing moths and robbers from getting a start.

Look out for moths in comb-honey that has been removed from the hive. If the combs show signs of worms the honey must be fumigated with sulphur on the same plan that has been given through the *Farmer*. It requires but little of the fumes to destroy the worms, but a second dose will be required in order to destroy those that were not hatched during the first fumigation, as the fumes will have no effect on the eggs. Their presence can be detected by their silky webs.—WALTER S. POUDER, in the *Indiana Farmer*.

Real and Artificial.

The Queen of Sheba having failed to puzzle Solomon with many enigmas and trials of his wisdom, stood some distance from the king holding in each hand a bouquet of lovely flowers. Those in one hand were Nature's own product, the other bouquet consisting of the most cunningly worked imitations. It was impossible for the eye to detect which were natural and which artificial. Solomon applied to his courtiers and wise men to give their opinion, but they owned their inability to decide between the two bouquets. The wise king then commanded a casement of the cedar palace to be thrown open, and admitted some bees. Attracted by the sweet perfume of the real flowers, the bees at once solved the mystery.—*Exchange*.

Introducing Queens.

We should like some of our friends, who have old and poor queens which they wish superseded, to try the following experiment: Raise the corner of the quilt on top of the frames, just about dark, so carefully that no bees become excited, or if they do notice the movement and start to crawl out, give them the least possible puff of smoke, allowing it to fall on the bees, as it were—this will cause them to move back quietly without disturbing any. When all is quiet, allow a young queen to pass in, and drop the quilt—carefully watch the result, and give the readers of the BEE JOURNAL the benefit of your experiment.

We venture the opinion that the young queen will kill the old one. If we take an old queen and a young one, and put them under a glass, allowing them to fight, the old queen being somewhat infirm, if she is laying, will be overcome by the more nimble and vigorous young one. This being the case, we believe young queens can be easily introduced in some sly, unnoticeable way without much trouble. If she enters the hive thus and is allowed her freedom, she is very much the same as a queen just hatched in the hive, strong and vigorous.—*Canadian Bee Journal.*

Bee-Culture in Egypt.

The Egyptians exhibit great skill in their manner of cultivating the bee. The flowers and the harvest are much earlier in upper Egypt than in lower, and the inhabitants profit by this circumstance in regard to their bees. They collect the hives of different villages on large barks, and every proprietor attaches a peculiar mark to his hive; when the boat is loaded, the conductors descend the river slowly, stopping at all places where they can find pasturage for their bees.

After having thus spent three months on the Nile, the hives are returned to the proprietor, and after deducting a small sum due to the boatman for having conducted his hives from one end of Egypt to the other, he finds himself suddenly enriched with a quantity of honey and wax, which is immediately sent to the market. This species of industry procures for the Egyptians an abundance of wax and honey, which they export in large quantities to foreign countries.—*Exchange.*

Immense Labor Performed by Bees.

Nectar is the term applied by botanists to the sweet tasting fluid which is secreted within the cups of flowers, and the object gained to plants by its presence is that insects, induced to visit flowers for its sake, are useful to the plants by effecting a cross fertilization, an additional amount of vigor being thus conferred on the seeds which subsequently result, in contrast with the evil results of "breeding in and in."

The formation of nectar is observed to take place most freely in hot weather, and to be prevented by cold or wet. So great economy is exercised by the plant that it is only formed at the time when insect's visits would be beneficial, that is when the anthers are ripe and shedding their pollen, or when the stigma is mature and ready to receive pollen. By biologists the visits of bees, butterflies and other insects are believed to have exercised, in past time, an important influence in modifying the shape, size, color, etc., of flowers.

Nectar is, of course, the source whence bees derive honey, but it also affords food to many kinds of insects which do not possess the same habit as the former of storing it up.

Prof. Alexander S. Wilson, of Glasgow, has recently investigated the amounts of sugar contained in the nectar of various flowers, and laid the result of his labors before the British Associations. He shows that 2½ pounds of honey are equivalent to the supply obtained from five millions of flowers, or about two and a half millions of visits for one pound of honey.

This shows what an amazing amount of labor the bees must perform, for their industry would thus appear to be indispensable to their very existence.—*Michigan Farmer.*

Comb-Foundation.

The use of comb-foundation is a subject of importance. Its value in the heat of the busy season can hardly be estimated. It is enough to say, however, that it requires twelve pounds of honey to make one of comb, which at 15 cents a pound is worth $1.80, besides the time required to make the comb; on the other hand a pound of brood-foundation costs 45 cents, a saving of $1.35 on the pound; besides you have it just where you want it, straight and true, no extra drone-comb, etc. Therefore, I can, with a hearty conscience, say, you make no mistake in using it, even in full sheets. It may seem a little expensive, but when you come to figuring it you will be surprised. One pound of medium brood-foundation will furnish full sheets for six Langstroth brood-frames, or about 7 cents per frame, or 50 cents to fill the brood-chamber of a dove-tailed hive. Now, instead of using full sheets of foundation I cut the sheets bias—that is, cut them diagonally across from one corner to the one opposite. This makes a wedge-shaped piece of comb and serves the purpose about as well as the full ones. In hiving a swarm on empty frames, you will notice the bees begin at one end of the frame and build down to the bottom and then bias shape to the upper corner, hence, I am inclined to believe that cutting the foundation in the shape above described is just the thing.—H. F. PETTS, in *Farm, Field and Stockman.*

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◆

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◆

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◆

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THOMAS G. NEWMAN,
EDITOR.

Vol. XXVIII. Sept. 10, 1891. No. 11.

Editorial Buzzings.

Friend Demaree has been suffering with another severe attack of sciatica. On the 26th ult. he wrote us as follows:

> I have suffered terribly for two weeks past. Old Sampson sciatica has "smote me hip and thigh." I guess I know what that passage means now.
> G. W. DEMAREE.

Drowned.—Willie Baldensperger, who has for many years been a close reader of the AMERICAN BEE JOURNAL in Palestine, was drowned on July 26, 1891, while bathing. His brother writes us as follows: "Besides a good brother, I lose a good friend in him. More than one-half of our time was taken up with bee topics." In his death the BEE JOURNAL has lost a devoted friend in the land that is sacred in the hearts of all Jews and Christians. Accidents happen everywhere.

The Honey Crop of California for 1891 is only one-fourth of the amount produced in 1890. So writes Mr. Geo. W. Brodbeck, of Los Angeles, Calif. The Southern California Bee-Keepers' Association will hold its annual convention next month.

Our Nebraska friends will be disappointed this week. J. M. Young was to have made a good display of honey at the fair from his apiary. For two weeks he has been suffering with a severe attack of fever, from which he is but just recovering. This will not only prevent his exhibiting, but also preclude his being in attendance.

Brazil will also be represented at the World's Fair. Capt. Rodgers, Commissioner to Brazil for the World's Fair, reports that "the State of Minas Gereas, Brazil, has appropriated $25,000 to meet the preliminary expenses of securing a representation of that State at Chicago in 1893. This is in addition to the appropriation made by the General Government of Brazil."

Gathering the Fall crop of honey in Canada is thus described by friend Jones in the *Canadian Bee Journal:*

> Our bees as they leave the home yard now, all sweep around to the north, and on walking through the yard in the evening, the odor of the mint honey was very easily detected. We took a run down along the flats and creek bottoms, and found the bees in large numbers, on what we term horse-mint, or wild mint, which is quite plentiful, and of which there are many varieties just coming into bloom. The Canadian thistle, in many places, has almost ceased blooming, but we passed a field to-day which seemed to have just come into bloom, and it would delight you to see the bees going from head to head, and the size and transparency of their bodies, as the bright sun shone on them, would indicate that they were filling up rapidly, and the odor from the field was so marked, that we knew the flowers contained abundance.

A Failure, is the result of the experiment by Mr. A. I. Root, in attempting to "cure *la grippe* without medicine." We were very skeptical about it, for we have had all the experience in that line necessary to bring about that state of mind during the past two Winters. Our testimony is that it is the most persistent and diabolical disease we know of! We are sorry to learn that Brother Root's theory of cure has failed, for it would have been a grand thing to have been able to "enjoy" a visit from *la Grippe* after so many thousands have pronounced it the most unenjoyable thing in the world. Brother Root says this in the last number of *Gleanings:*

> Well, friends, I am here in bed yet, but have much cause for thanksgiving. My blood has got down to only 98 4/5° —only 2/5 of a degree, as you will notice, above the great level of all the blooded universe.
>
> Brother Newman smiled a little at my "enjoying" having the grip. Well, I take it all back. There was a point reached where even *I* couldn't find a thing enjoyable about it; and this reminds me, since I have said so much about doctoring *without* medicine, that I shall have something to say, Providence permitting, in our next issue, in regard to doctoring *with* medicine. Very likely the great Father is teaching me some needed lessons along this line.

◆

Bees Work at Night in the hive, and build comb as perfectly as if an electric light had shone there all the time. Many times we have been asked why they prefer the darkness, but there are good reasons for doing so.

All know that honey is a liquid without any solid sugar in it. But, after standing, it gradually assumes a crystalline appearance; in other words, it granulates, and ultimately will become a solid mass.

Some have stated that this change is due to the same agent which alters the molecular arrangement of the iodine of silver on the excited collodion plate, and determines the formation of camphor and iodine crystals in a bottle.

We are informed that Prof. Schieber enclosed honey in well-corked flasks, some of which he kept in perfect darkness, while the others were exposed to the light. The result has been that the portion exposed to the light soon crystallizes, while that kept in the dark remains unchanged.

Hence, we see why the bees are so careful to obscure the glass windows which are sometimes placed in their hives.

The existence of the young depends on the liquidity of the saccharine food presented to them, and if light were allowed access to this, in all probability it would prove fatal to the inmates of the hive.

◆

At the World's Fair no side shows are to be permitted within the Exposition grounds. The Directory has decided that the entrance fee shall entitle the visitor to see everything within the enclosure. There will be, however, several theatres built and kept running, at which the finest talent in the world, it is expected, will appear, and visitors who choose to attend the performances, will have to pay an admission fee. Such sights as "A Street in Cario," will be free, but natives of oriental countries, in a few cases, will be allowed to charge a small fee to special performances of a theatrical nature.

◆

The Exposition at Chicago this year, will open on September. 24. If the Northwestern Bee-Keepers' Convention is held this year, it should be during the Fat Stock Show—about November 19 would be a good time.

◆

The numerous exciting events in the yachting world, and the keen popular interest shown this season in the noble sport, make the paper on "New York Yachts and Yachtsmen," in Frank Leslie's *Popular Monthly* for September, peculiraly interesting and timely.

Queries and Replies.

Honey-Dew for Winter Stores.

Query 783.—1. Will bees winter safely on honey-dew, in a dry cellar of an average temperature of 45°? 2. If not, can I winter them on combs from an extracting super filled with sugar syrup and no pollen; reserving the brood-combs filled with honey-dew for next Spring?—Nash.

1. I think so. 2. Yes.—James Heddon.

1. In my climate they would.—J. P. H. Brown.

1. I have been told that they will not. 2. I think so.—C. C. Miller.

1. They may, but it is not so safe as clover honey. 2. Yes.—Dadant & Son.

1. A trial only would determine. 2. Yes; that would be an excellent way.—R. L. Taylor.

1. I would be afraid to risk it. 2. This I believe to be your safest plan.—J. M. Hambaugh.

1. I had bees winter fairly on honey-dew one Winter, which is all the experience I ever had with it.—G. M. Doolittle.

1. Yes, and no. It depends on the quality. We now have honey-dew that I have no fear of. If rank, no. 2. Yes.—A. J. Cook.

1. That is a question that bothers me a good deal just now. My experience says no, but still I may be mistaken. 2. Yes.—C. H. Dibbern.

1. Yes, if it is of good quality. 2. Yes. That is the "pollen theory," simon pure, and is the best way to winter bees.—A. B. Mason.

1. I do not know. I should think that they might, if it was gathered and well ripened in the early part of the season. 2. Yes.—Mrs. L. Harrison.

1. I should be afraid to try it, if there was any considerable amount of honey-dew in the brood-chamber. 2. You can, undoubtedly.—Eugene Secor.

1. There are many kinds, or grades, of the so-called honey-dew. I have seen a little of it that ought to kill anything that could be induced to swallow it; and I have seen more of it that would be perfectly safe as a Winter food for bees. 2. Sugar syrup will winter bees about as well as good honey, and you need give yourself no anxiety about pollen. Bees need pollen to start brood-rearing in the early Spring.—G. W. Demaree.

1. I do not believe they will, though I never have tested it. 2. Yes. Sugar syrup is claimed by many to be the very best Winter food. I should not use the combs of honey-dew for any purpose.—J. E. Pond.

1. It depends on the kind of "bugs" that produce the honey-dew. That from beech forests is fatal to bees, in or out of the cellar. That is the only kind I have had any experience with. 2. Yes.—M. Mahin.

1. No. 2. It is safe to winter on combs having pollen and sugar syrup, but not so safe without pollen. Where bees can have Winter flights on the summer stands, if well protected, they will winter safely on honey-dew.—G. L. Tinker.

1. That depends on the quality of the "bug-juice" and the Winter temperature. In a mild Winter it might do, but in a severe season there would be great danger in its use. Many whole apiaries have been ruined by its use, and it would be wise to advise caution. 2. Yes; that will be a safe way of disposing of the honey-dew.—The Editor.

Keep the Bees at Work.

The bee-keeper cannot afford to have idle bees for want of room, or because they refuse to work in the supers, says the *Northwestern Agriculturist*. Try in every way to induce them to work above.

One way is to replace one or two frames of young larva below, with empty combs, and then with the zinc excluder keep the queen below. By putting the brood in the center of the upper story, they can be started in the top.

Those working for comb-honey take sections that were partly built out the year before, or from colonies that are already working above, and put in the hives they are trying to start.

This is where beginners are most apt to fail. They think something is the matter with the bees, when they only need coaxing to start them above. This should be done as early in the season as possible, for if neglected, and the bees are crowded below, they will get ready to swarm by starting queen-cells.

Topics of Interest.

"Humbuggery in the Queen Trade."

HENRY ALLEY.

Mr. C. J. Robinson, on page 271, has given the readers of the AMERICAN BEE JOURNAL a very lively article on the above subject. The reflections on some of the "noted" breeders has attracted my attention. About the only point which I think is aimed directly at me is, "The most recent humbug is the puffing of *yellow* Carniolans." Well, let us see how much humbuggery there is in puffing the yellow Carniolans.

The first Carniolan queen brought to America came to the Bay State Apiary. That was some ten years ago. Of course, the imported queen was used for a breeding queen. As soon as there were plenty of Carniolan drones reared from the imported queen, I had a fine lot of young Carniolan queens to be mated.

This could not be done in the same yard with the Italians, and so the Carniolan bees were removed to a yard where there were no other bees within a distance of more than one mile. The young queens were mated promptly, and in due time the young worker-bees put in an appearance, and I was surprised to see yellow-banded bees from *every* queen.

Now this happened, notwithstanding the fact that there were several thousand Carniolan drones in the same yard with the queens. Had but few of the young queens produced bees that gave yellow bands, it would have been natural to suppose that they had mated with Italian drones, but no man of any experience with bees has the least idea that *all* these young Carniolan queens were mated to Italian drones from an apiary over a mile away, while there were so many Carniolan drones near the queens.

Here let me say that the imported mother did not produce *one* worker-bee that had the faintest yellow band. But the young queens were very light colored (not yellow), a fact plainly indicating that there was some blood in them that was not Carniolan.

Well, these bees swarmed so much that they were abandoned, and no more Carniolans were reared in my apiary till the year 1889. I then purchased of Andrews & Lockhart a full colony of as fine and well-marked Carniolan bees as ever came into America—not a bee in the colony that was not a typical Carniolan. Queens were reared from this colony, and the same methods to insure pure mating was adopted as with the imported queen received in 1881. The result, however, was the same.

I could not produce a "pure" Carniolan queen, or rather a queen whose bees were purely marked. I found that these bees could easily be bred to a pure golden yellow, clear yellow or orange yellow. So, selecting the light colored queens and drones, I soon produced the golden Carniolan bees.

Now, can any one tell the readers of the BEE JOURNAL where the "humbuggery of yellow Carniolan bees" comes in? Is not the process of producing yellow Carniolan bees as simple as anything can be? Does any one see any reason for cheating or swindling in this matter? Is there any reason why any one need mate dark Carniolan queens to Italian drones to produce yellow Carniolan bees?

Here is a problem for Mr. Robinson to solve: In 1889 I had an order for some Italian queens to be mated to Carniolan drones, and Carniolan queens to be mated to Italian drones. In both cases the progeny of these queens were handsome—yes, beautiful—Italians; not one dark bee from either queen. Why was it that these queens did not produce what are called hybrid bees? Simply for the reason that the yellow blood predominated. This is all there is about it.

The Carniolan race of bees are the original yellow bees. Has any reliable authority decided whether the Italian bees, in their native country, were produced by the Carniolan race, or that the yellow in the Carniolan came from the Italians?

As not a pure queen has ever come from Italy to America (that is, a queen all of whose worker progeny were three banded, and whose daughters were golden in color), it is safe to say that the bees in Italy are hybrids.

Why is it that the Italians will degenerate in color, and breed back to black bees, while the Carniolans will grow more yellow each succeeding generation? Any one can answer these questions: it is plain and evident enough.

Why is it that everybody who rears the silver or dark Carniolan queens has the same trouble to produce pure Carniolan bees? How many queen breeders in this country can say that they have queens that will duplicate themselves?

The black tint in the Italians will increase always, while on the other hand the yellow in the Carniolan is as certain to come out more prominently each generation. It is nature in both cases.

Mr. Robinson has much to say in praise of some of those parties who sent out the first Italian queens. I paid a big price to some of the men mentioned for *pure* Italian queens, but not one, however, was pure—and from no high-priced queen purchased could I rear more than 25 per cent. of yellow queens.

I do not claim that these men were dishonest—I know they were not. They sent out the best queens that could be produced, and which at that time were worth the big money paid for them, even though the queens were impure.

Of the golden Carniolans let me say one word further. Up to date I have sent out about 500 golden Carniolan queens, and not one word has been said against them, while on the other hand I have heard a good deal in their praise. One of the oldest queen breeders in the country, to whom I sent a golden Carniolan queen, has this to say of the new strain of bees:

> "The golden Carniolan queen came to hand promptly, and was safely introduced. I am well pleased with her; have begun breeding from her to re-queen my apiary. I have reared and sold many thousand Italian, Cyprian and Holy-Land queens, but never had one please me better than the golden Carniolan queen received of you.
>
> "E. T. Flanagan.
>
> "Belleville, Ills."

I have hundreds of such testimonials. Now, if these bees give such satisfaction, where does the humbuggery come in? If yellow Carniolans are hybrids, why is it that 95 per cent. of the young queens are duplicates of their mother? There is in my apiary a large number of queens that produce the most beautiful queens and bees that ever graced an apiary. These bees are but four generations from solid black or gray Carniolans. Each succeeding generation produces more beautiful and yellow queens, drones and worker bees.

One word more and I have done. Has Mr. Robinson discussed this matter in an impartial manner, or in a spirit of kindness, and for the good of all? Here let me ask Mr. R. how much experience he has had with the Carniolans? Has he ever had any? Has he not called the producers of the golden Carniolans humbugs, without presenting one particle of evidence to back his wild statements? I will give Mr. R. a chance to make good his claim, if he thinks it can be done.

I will place in the hands of the editor of the Bee Journal $100 to be paid for a Carniolan queen bee that I or any competent queen breeder cannot produce the most beautiful golden bees from, and no other bees shall be used but those from the pure Carniolan queen selected. I am willing that Mr. Frank Benton shall select the queen, or get some one to do so for him, and that Mr. Newman, A. I. Root and myself shall select the person to conduct the rearing of the queens.

If yellow bees cannot be produced by the method I will give, then I am to pay the $100, but if the yellow bees and queens are produced, then I am to pay nothing.

These bees may be reared on an island in the middle of the ocean for all that I care. Rear them as many miles from all other bees as will insure pure mating, so that no one can say that any of the queens were mated to a yellow drone.

I have made the above plain statements, and hope all the readers will find therein sufficient evidence to convince them that there is no humbuggery about the golden Carniolan bees.

Now, I have taken a great deal of pains to produce this strain of golden Carniolan bees. I consider it a progressive step, and that by the development of this most beautiful, quiet strain of bees, I have done for the apicultural world a good thing. These bees possess all the good qualities of the Italians and gray Carniolans, and are superior in all respects to any race or strain of bees in the world, unless it be the Punics, of which we know but little.

In conclusion, let me say that any one who spends his time and money to benefit his fellow man, is not very well paid if he is to be considered and called a humbug and swindler. It is poor encouragement for any one to undertake the improvement of the races of bees, or to take any step in advance of the old methods so long in use. I do not propose to remain in the old ruts of bee-keeping, if there is a chance to get out of them. That I have made an effort to advance apiculture cannot be denied by any bee-keeper who has a knowledge of my history.

I trust no young bee-keeper will be deterred from making an attempt to advance bee-culture for the reason that some one has tried to "sit down" on the writer for what he has endeavored to do.

Wenham, Mass.

Large Apiaries in Italy.

DR. A. DUBINI.

I have made a visit to Prof. A. Mona, at Locarno, where he is occupied in the High School, in the garden of which is his home apiary. There I found a goodly number of his large hives, constructed with movable bottom-boards, and externally clothed with straw; there were spread about also many small hives of nuclei, likewise with movable bottom-boards, holding 4x5 frames all covered with bees, each with its queen already fecundated.

Opening one of these large hives is found a diaphragm which serves in Summer to change the capacity at will, and which is replaced in Winter by another, thicker, made of straw and slats of wood which helps to keep the colony warm. Prof. Mona calls this diaphragm a "restrictor" (in America a division-board), which word, he thinks, better designates a movable partition.

The frames of the nuclei are half the size of those in the large hives. By cutting a large frame and its comb in halves, he can at all times take brood from a large hive to a nucleus.

Prof. Mona thinks that queens prefer deep frames in which they can extend the egg-laying without interruption. Sometimes he fastens two of the small frames into one large frame, which, when filled with brood are detached, and put into nuclei. He almost always gives to the nuclei ripe royal cells, but sometimes also virgin queens, if they are just hatched, or even queens already fecundated.

A very intelligent young man, Ernest Ruffy, of Vaud, assists him in his work, and the Professor shares with him a portion of the profits, on account of his great aptitude and cleverness in the business.

Just as we arrived, Mr. Ruffy was engaged in closing up a nucleus to go to Paris, containing a beautiful queen with three pounds of bees, and had still another to prepare for the same destination.

We passed the evening together to a very advanced hour, and I do not need to tell with what pleasure and profit to myself. I am indebted to the profound wisdom of the Professor, and to his enlightened experience, as also to his amiability, for many useful and practical hints for which I take this opportunity to express my deep gratitude.

One wish of the Professor would be to establish in some good honey locality in Lombardy, an apiary of 200 to 300 colonies, which would be transported, when the honey-flow is past in the plain, to the mountains of Lake Maggiore, in order to profit by the flowering of the walnut trees, buckwheat and heather.

Early next morning I left Locarno by rail, and stopped at Gordola. At a short distance from the station stands two of the apiaries of Mr. Jean Pometta, a clever and ingenious mountaineer.

One of the Pometta apiaries is at Tenero, three-quarters of an hour from Gordola; another at Gudo, at a great altitude, and about two hours' distance from Gordola; the third is at Lavertezzo, in the Valley of Verzasco.

I did not meet Mr. Pometta at Tenero, but was received by the amiable Dr. Galletti, in whose house and garden Pometta keeps his tools, and about 150 colonies and nuclei scattered around on the grass. Several of the hives are the same as those of Prof. Mona, but the others, of a newer make, are of the American pattern.

I found the bees here singularly beautiful, with three distinct yellow rings, and the Doctor told me that Pometta conscientiously gives great attention to the selection of the queens. The Doctor, while showing me some sheets of foundation, said, "It is hardly to be believed how well the bees know what to do with foundation, in the cells of which we often perceive on the second day, honey and eggs."—*L'Apiculteur.*

Feeding Back Partly-Filled Sections.

G. W. DEMAREE.

The early honey season in this part of Kentucky accorded with the predictions of the prophet, Samuel Wilson, of Tennessee, as made known to me by a postal card from that gentleman in the latter part of last Winter. It was fairly good, and my honey crop is above the average. My bees, however, were kept together at work, instead of letting them spend their opportunities and forces splitting up into fragmentary swarms. Each apiarist, however, must study his own locality, then act intelligently.

Before I take up the subject that moves me to write this article, I am tempted to denounce the sharp corners of the one-piece sections. They have worried me this season as never before. Somehow or other, more nice sections have been gouged for me this season than ever before, by the sharp corners of these same one-piece sections. There is no reason why they cannot be better made. It would be just as easy to finish them with an easy, round corner as any way, if proper machinery were used. Any manufacturer who will give us a one-piece section with smooth, round corners, will no doubt get his reward in the way of patronage.

The honey season promised so fair last May, that I was tempted to carry the tiering system too far for the outcome of the season, and this gave me nearly 500 unfinished sections with which to take up my experiments of last season—"feeding back" to have them finished.

I selected 3 colonies to do the work. The brood-chambers were contracted with sealed combs of honey, and brood in all stages. The feeders used are the same size as the section cases, except the projection at the back of the hive to give room for the feed holes. The "climbers" (or partitions) in the feed boxes must not be more than a half inch apart, or the bees will build bits of comb in them if long in use.

Continuing the experiment from last year, the feeders were placed directly on top of the brood-chambers, as the most convenient and best place for them. The section cases were tiered on the feeders, in the usual way, and when one case was pretty well filled, and the most advanced sections began to be sealed, the case was lifted and another one put under it. Tin separators were used in T cases, and the partly sealed unfinished section combs were uncapped with the uncapping knife, and trimmed when they needed it, to go between the separators.

If nice work by the bees is desired, every cell must be uncapped, or there will be an irregular surface on the face of the sections, and the color of the capping will not be the same.

The fullest sections were put on the sides and ends of the cases, and those containing less comb and honey were placed in the center. The cases were put in readiness as they were needed to keep the bees supplied, for the uncapping of the sealed spots will set the honey to dripping, and there will be waste, if the work is done long in advance of their use.

Now, about the feeding. How much, and how often, and in what condition to feed? These are matters that were looked after and watched with much care and no little interest. As to how much may be fed at a time would, in a practical point of view, depend on how much empty comb was in the section case at the time the feeding was done, but experience has led me to feed three pounds of good, thick honey per day, diluted with one and one-half pints of water. This is fed just before sunset every evening, rain or shine.

To most people, this would look like light feeding to have comb built and honey stored right along—and so it would look to me if I had not taken the pains to investigate the matter.

If you will take a clean surplus comb and place it in the center of a surplus case when the bees are gathering nectar from white clover rapidly, and when it is filled with nectar fresh from the fields, remove it and subject it to a temperature of about 90°, under a current of air, until the nectar in the comb is evaporated to the consistency of good thick honey, you will find by weighing the comb, before and after the process of artificial evaporation, that the loss by evaporation is from 50 to 66⅔ per cent. Thus, in a practical way, 3 pounds of standard honey is a fair representation of from 6 to 9 pounds of nectar per day, which is a splendid income per colony during a good honey-flow from white clover in my locality.

Of course, the feeding may be done more rapidly, but it is a question of economy and profit, and the matter must be settled on this basis. I have reason to believe that the nectar from some sources will lose in evaporation as much as 80 per cent.; and even with white clover much depends on the state of the atmosphere when the nectar is gathered.

Two colonies were made to finish up 480 sections that were in all stages, from one-fourth to three-fourths full of comb and honey, and that the work was done at a good margin of profit there was no room to doubt.

The third colony was put to work to solve a knotty problem, to-wit: How much liquid honey is necessary to complete a pound of comb-honey? Perhaps this question will never be settled to a dot, but in a practical way I think I have settled it.

This trial colony was prepared as described above, and was put to work on a case of partly-finished sections, and after they had begun work in full force, and had the case of partly-filled sections well on toward completion, the case was lifted, and a case of new sections, filled with Dadant's extra thin foundation, was put in its place, and then a bee-escape board was placed on it, the lifted case, with its bees and honey, was placed on the escape-board and left there until the bees had all passed through the escape below. This case was then given to one of the feeding colonies to be completed, and the trial colony was left to go to work on the new sections. The feeding went on regularly at three pounds a day, diluted with one and one-half pints of water. It required 41 pounds of honey to complete the 32 sections.

The second case was prepared with starters only, of the same make of foundation, the feeding was kept going without intermission, and it required 30 pounds to finish up the 32 sections, showing that there was a loss somewhere in the first experiment.

A third trial, with starters only, was made, and it required just the same as the preceding trial—30 pounds—to complete the 32 sections. In the aggregate there was fed 101 pounds of honey, and 96 sections were completed—an average of 33⅔ pounds to the case of 32 sections.

Were I to stop here, these figures would be misleading, as the idea is abroad that a one-pound section means, in fact, one pound of honey, which is by no means the case. The sections used were 1¾ inches in width, and fitted closely between tin separators. The cases were accurately weighed before they were given to the bees, and weighed again after they were taken off of the hive. In net honey, and wax added by the bees, the sections averaged exactly 12 ounces—24 pounds to the case of 32 sections.

It will be seen that the 3 cases of sections of 32 each, contained 72 pounds of honey *net weight*, and it required 101 pounds of liquid honey to produce the 72 pounds of comb-honey. But as a matter of fact, these 12-ounce sections represent in the trade *one pound of honey* each, as they are sold by the piece for as much as heavier sections built without separators, and as a matter of profit, this is the way to put it.

Upon this basis, I produced 96 sections (12 ounces each), worth, at 14 cents each, $13.44, at a cost of 101 pounds of extracted-honey at 10 cents, worth $10.10; leaving a profit of $3.34, less the cost of sections and foundation starters.

In conclusion, I wish to say that I have had too much experience to be carried away by the results of an experiment of this kind as it cannot be known how much honey (if any) may have been carried by the bees from a brood-chamber crowded with sealed honey, during the time these sections were in process of completion, but I think there are more chances in favor of loss in this direction than gain, and if I live, I hope to be able to repeat these experiments on a larger scale in the future.

Christiansburg, Ky.

Cell of the Honey-Bee.

W. H. RAIGENT.

When we behold this little insect constructing its cell, to contain its Winter stock of honey—constructing it of that form which is demonstrably the strongest, and the most convenient—it seems the extravagance of absurdity to suppose that the instinct by which it is directed is the offspring of ignorance.

The phenomenon, indeed, is one of the most extraordinary that the animal world presents to our contemplation. It must be evident to every one who has given the least attention to the obvious properties of different figures, that there are only three which will admit the junction of their sides, without any vacant spaces between them, all the figures being equal and similar, namely, the square, the equilateral triangle, and the hexahedron ; of these the last is the strongest and most convenient.

In this form, then, we find that all the cells are constructed. This is a curious and wonderful fact; and what is quite remarkable, the middle of every cell on one side is directly opposite to the point where the three partitions meet on the opposite side. By this position the cell receives additional strength.

This is not all. If human ingenuity were to contrive a cell, which would require the least expenditure of material and labor, it would be a question not easily solved, at what precise angle the three planes which compose the bottom ought to meet.

The late celebrated mathematician, Maclaurin, by a fluxionary calculus, determined precisely the angle required; and he found by the most exact mensuration the subject would admit, that it is the very angle in which three planes in the bottom of a cell of honey-comb do actually meet. The same curious fact was ascertained by a German mathema tician: Reaumur, presuming that the angles were adopted for the purpose of saving material, proposed to Koenig, a mathematician of eminence, that he should determine what would be the angles of a hexagonal cell, with a pyramidal base, to require the least material. By the infinitesimal calculus, he ascertained that the greatest angle should be 109° 26′, and the smaller 70° 34′—the very angles which the insect adopts.

What an astonishing coincidence is this! A profound mathematician is required to solve a very difficult problem; and it is found that his conclusion, gained by the exercise of considerable ingenuity and deep thought, was practically exhibited in the operations of the bee. How few are capable of that scientific investigation which this insect illustrates by its practice!

It seems the extravagance of folly to believe, that out of the numerous different combinations of which two angles are susceptible, that which *most* saves labor and material should be adopted by random chance, or blind necessity. He that holds the ocean in the hollow of His hand—He it is, in the darkness of the hive, guides this little insect to fashion and mould the cell, and form the comb in the beautiful and wonderful form in which we behold it.—*British Bee Journal.*

Are Your Bees Ready for Winter?

A. D. ELLINGWOOD.

One reason why so many bees are lost in wintering is because they lack preparation in the Fall. The bee-keeper is so anxious to get a large crop of surplus that he forgets to see that each colony has an abundance for their own use.

By Sept. 1 the sections should be removed from all hives, unless the lower part is well filled, and the colony seems strong enough to spare the workers above. If a colony has 25 or more pounds of honey in the brood-comb, and are doing good work in the sections, of course it would not be policy to take them off; but if the colony is weak and short of stores, the sections should be removed, and the hive contracted and made as snug and warm as possible.

No colony should be put into the cellar with less than 20 pounds of honey for their Winter's use, and if your hives do not contain 15 or 18 pounds by Sept. 15, feed the bees at once.

Syrup should be fed quite thin, as the bees can handle it better, and it is not so liable to candy. Granulated food is poor fare for bees to Winter on.

I believe the condition of the food, and its position in the hive, has more to do with successful wintering than the temperature. A hungry bee will freeze and die almost anywhere, but a well-fed bee, with plenty of nice honey to look forward to, does not like to die any better than a man with a well-stocked house, and a good, large family.

No other animals make such provisions for Winter as do the bees. They delight in having a large Winter store, and if they are deprived of it they lose heart and die.

It is a curious fact, that bees with 75 or 100 pounds of honey in the hive, will consume less than a colony with 10 or 15 pounds. We have proven this over and over again. They also keep quieter and Winter better.

Berlin Falls, N. H.

Women as Bee-Keepers.

MRS. J. M. NULL.

Consider for a moment the great armies of women wage workers, who are simultaneously a standing credit and a reproach to many of our large cities! Pinched by penury, worn out and shattered in health by unceasing application, still, at times, lifting the soul above and beyond the ever pressing present, when it is impossible to restrain the irrepressible heart-yearnings for a life amid even the free gifts of heaven, a superabundance of fresh invigorating air, pure cooling water, the all-pervading revivifying sunshine.

Oh, yes; all these, and much more, are to be enjoyed unasked for, free and unlimited in a life in the country, but never in the stifling store, shop, factory, or over-crowded school-room. Think you not bee-keeping offers to such a delightful, fascinating, healthful and lucrative employment?

Woman is a slave to fashion in dress, fine cooking and fancy work; and is constantly sacrificing herself for these luxuries. The woman who never ranges beyond the heat of her own cook stove, cannot rise to the full stature of womanhood, and be the wise counselor of her husband and children that she was designed to be.

Doubtless you have all heard of the woman who has toiled early and late, lo these many years, for the best interest of her lord and master, and is grudgingly allowed an occasional pittance for needful clothing. One of these lives in my locality. Her husband, the owner of hundreds of acres, kindly granted her space enough in the orchard to place her ten hives of bees, but insisted that she was, on no account, to expect any assistance from him or his help. What she should do would be to dot that orchard with the white domiciles of her bees, claim the profits, and thereafter have in her history an independence day to celebrate.

Women are so constituted as to demand pets; from husband, children and friends, down through the long line of plants, birds, cats, dogs, etc. Her pets are the constant recipients of caressing attentions. Then why not supplant the more unprofitable ones by the busy bee?

Bees for pets! They sting! Admitted, but women love and caress cats and dogs, and bees never scratch nor bite, and have never been known to transmit hydrophobia.

Get women interested in bee-keeping, and there is no knowing to what heights their ambition will lead them. Do you deny them the attribute? Just wait until the Spring bonnet has to be purchased, and some of you who have the bills to foot will agree with me. Women have ambition; yes, with quite a reserve yet to be heard from.

Doolittle, in one of his late messages, says: "No one should follow any of our writers blindly—that is, without having some thoughts of their own." This is a good reason for women becoming bee-keepers. They all have thoughts of their very own.

As managers, women excel. No business will give them greater scope for the exercise of this talent than bee-keeping. She who can out-general decamping swarms when the air is black with masses of excited, determined fugitives, may well weep for other worlds to conquer.

Again, the ambitious woman apiculturist has neither time nor opportunity to either hear or deal out gossip, and thus is happily kept out of many a muddle. Do not imagine that I am taking the stand that bee-keeping can be run without labor, or with but little brains, unless, indeed, you wish to run it into the ground.

But did you ever think of the amount of patience and endurance involved in the production of yards of crochet trimmings, elaborate designs in embroidery, wax-work and painting? Engage the same amount of perseverance, energy and concentration of mind in the apiary, and note the grand results. And although Dr. Miller "don't know" about some things connected with bee-keeping, he is satisfied that he does know that a woman is as good an assistant as he wishes.

To be sure, it is not a "flowery bed of ease," but who could desire it, knowing that those of other vocations must "fight to win the prize." There are to be endured the bedragled skirts on dewy morns, and the long, hot days in June, when the mercury dances around 100°, and the prespiration just flows in streams. But then what cosmetic is superior?

Woman's innate love of the curious and beautiful, will at once be satiated in the pursuit of apiculture. The gold of the bees is never counterfeit. They never make false assignments, nor move out in the night, not paying for the place vacated.

Women are constantly seeking to elevate themselves, and as some of the brightest intellects are engaged in bee-keeping, and since it is confessed on all sides that women possess much more nimble, dextrous fingers than men, and as bee-keeping readily coalesces with house-keeping, being easily carried on in the door-yard, and as we are not asked to accept any less for the fruits of our labor, simply because we are women, pray tell me why bee-keeping is not eminently suitable to women? But it just occurs to me, with great force, that delightful as this harangue may be to myself, its length, breath and depth may be just the least bit wearisome to you.—*Read at the Missouri State Convention.*

A Lecture on the Honey-Bee.

Mr. G. B. Jones recently delivered a very interesting and instructive lecture on the honey-bee at Toronto, which was illustrated by large charts depicting the various portions of the anatomy of the bee. From the report of *Farm and Fireside*, we make the following extracts:

The family of the honey-bee consists of three distinct varieties of individuals: The queen (or mother), the drones (or male bees), and the workers (or laborers—undeveloped females).

The tongue of a worker averages in length one-quarter of an inch, and is about as thick as a coarse hair, somewhat flattened, and slightly tapering. Small as it is, it is covered exteriorily with fine stiff hairs; interiorily it is hollow, and contains, folded within it, a small bag, formed of an exceedingly thin, colorless membrane. The tongue terminates in a minute suction funnel, which connects through a valve with the bag; the under side of the tongue is slit its whole length.

The maxillæ, or under jaw, of the bee, is in two pieces, which move sideways, and in conjunction with the caraglossal or side branches of the tongue forms a tube, through which the honey (when in sufficient quantity) is pumped into the pharynx by the up and down motion of the hairy tongue within the tube, just as water is pumped by the vacuum-causing motion of the sucker.

When honey is too scarce to be pumped up, the bee places its tongue-funnel over it, and by expanding its tongue-bag through the slit causes a vacuum, into which the honey is drawn. When this bag is full it is compressed, and forces the honey through an opening in the back of the tongue into the pharynx. When at rest the tongue is telescoped one-third of its length into the mentum (or hollow chin), and, together with the enclosing maxillæ, is folded back under the chin out of danger.

The antennæ of a worker, although as fine as a hair, consists of eight movable and four fixed joints; its outer surface is studded with hairs, which are really nerve sheaths, and is perforated with smelling and hearing holes. On the under side of the first and longest joint are innumerable long fine feathers, each of which contains a feeling nerve. The number of smelling holes is 2,400, while the hearing holes are too numerous to count, as are also the nerve sheaths.

The queen has only 1,600 smelling holes or nostrils, while the drone has 37,800. But how marvellous is the interior of this organ when it contains all the muscles necessary to move all the eight joints in every direction, all the nerves which run, one from each smelling hole, and nerve sheath; a most complicated system of ærating tubes, and the blood.

The bee has three simple eyes like our own, but fixed in the center of its forehead, and on each side of its head one compound eye, resembling a large blue bead stuck there. Each compound eye is made up of 6,300 simple eyes, grouped together and partitioned by a thin scale. Each separate eye of the group is perfect in itself, having its own cornea, pupil, lens, vitrious humor, retina, and optic nerve. How minute, then, must be the partitions and the nerves when the facets (or corneas) themselves measure only 1/1800 of an inch each across.

The brains of the bee consist of one large ganglion, or nerve center; whether the bee's thinking powers lie here is not known, but that bees have what is at least akin to power of thought, the lecturer clearly proved by some wonderfully interesting and amusing facts he related of their action under his own and other reliable observation in unusual circumstances.

The head contains one pair of salivary and one pair of chyle milk glands. A third pair of salivary glands is located in the thorax.

The fore legs carry each a comb for cleaning the antennæ, an eye brush and a tongue brush, while the fore and hind feet are provided with a clothes brush, two claws for climbing rough surfaces, and a sticky pad for climbing smooth ones. A spur under the elbow joint of the middle leg is used to dislodge the loads of pollen from their places in the pollen basket of the hind legs.

The middle feet are really hands, and compose the bee's tool chest, for they are provided with a mason's trowel, a varnish and glue brush, two pairs plyers, two pairs shears, and one pair tongs.

The second joint of the hind leg is hollow on the outer surface, and the hollow is fringed with inward-curving stiff hairs, so as to form a basket in which the bee carries home the pollen of the flowers. They use the pollen to make bread. The manner of loading this basket is most interesting, and was dwelt on for some time by the lectûrer, and fully illustrated by the charts. In fact the legs, feet, and the wonderful wings form a subject in themselves which can only be treated with the aid of drawings.

The wax is not gathered from the flowers as many persons imagine, and as many undertake to teach, but is an animal product secreted by very intricate glands under the lower scales of the abdomen. It is the superfluous fat of the bees, and oozes out as sweat, hardening as it meets the outer air into little quadrilateral scales. These scales are used in comb-building.

The sting consists of sting proper, poison-bag and poison glands. The sting proper consists of a sheath and two lances. The lances are grooved, and work upon a bed on the sheath independently of each other, and each is moved by its own muscle. The ends of the lances project beyond that of the sheath, and are barbed. When the sting enters a foreign substance the lances immediately begin to work alternately in such manner as to carry the sting proper its whole length into this substance, even after the sting has been left behind by the bee.

A healthy sting will work for several minutes after it has been severed from the bee's body. The sting of a dead bee often retains its life and energy for 24 hours. Apiarists are often stung while handling dead bees. While the sting is working, the poison bag is constantly contracting, and forces its contents through an opening between the lances into the wound caused by the action of the lances.

The bee's egg is a marvel in itself, although so small that only a practiced eye can see it. It has its yolk, its white, and its shell, and, besides this, it is enclosed in a beautiful network of air vessels. Three days after it is laid the egg hatches, and we find coiled up in the bottom of the cell a tiny white glistening grub, which for three days is fed on chyle secreted in the heads of the nursing bee. It does not eat this food, but absorbs it through its skin.

In from nine to eleven days the perfect bee emerges from its cell. As soon as it makes its appearance the nurses feed it, and in less than 24 hours it has learned to feed itself, and has begun its duty as a nurse. After spending five to seven days as a nurse, it becomes a wax-producer, and for about a week it hangs with its sisters in a cluster and eats enormous quantities of honey, becoming so fat that the wax glands, to relieve the system, draw upon the fat, and convert it into wax, as already described.

During this time the bees need exercise, and they get it for about two hours each fine day, when from about 2 o'clock in the afternoon till 4 they go out to play in front of their homes. Mr. Jones assured his audience that young bees actually do play, and that none who have watched them can doubt that they really enjoy their outing. He then minutely described, with the assistance of his charts, the process of comb-building.

The third week of the bee's life is the most varied in its labors of any in its existence. It is spent in comb-building, pollen-gathering, house-cleaning, ventilating, home and queen guarding. The bees show an unmistakable desire to be part of the queen's retinue, often intruding themselves among her body-guards to the disturbance of the general order of the hive. It is remarkable how often the guards change. After the third week the bee devotes nearly all its time during the day to foraging, and during the night to comb-building.

Lights and Shadows of Bee-Keeping.

MRS. C. WINN.

I will begin with the shadows: You know the old adage, "Business first, and pleasure afterward," and surely, if it were not for the business end of the bee, many a shadow would be lifted, and ladies would engage in the work with less fear and trembling.

A very dark shadow is in having a husband that the bees have a special grudge against, even attacking him at our bee convention, making life miserable for two or three days.

Young ladies who are engaged in this work, I would advise you to look to this matter before it is too late, and thus save yourselves many a sad hour experimenting, studying periodicals, books, etc., for remedies for bee-stings.

Another shadow that fell across our path (while the bees yet belonged to my father), was the mice. During the Winter, after the bees were put into the cellar, every week or two would find us changing the frames from one hive to another, and in one hive the mice had built a nest, and before Spring 3 colonies were destroyed, and we killed as many as 14 or 15 mice in traps, etc.

Considering the number of times the bees were disturbed, they wintered well, and 20 colonies were put on the summer stands; but two more were soon lost on account of robbing. Having no experience, we did not know what to do to prevent it, and I think, from articles I have read on the subject, that others than myself have had the same shadow over them.

When I took the bees as my own, there were 18 colonies, and only two or three that did not need feeding to keep them from starving. As, during apple bloom, the weather was so cold and windy that they were unable to gather any honey, I fed them until white clover bloom.

It was while feeding them, that I received the only sting which I have had while working with the bees, and my courage is much stronger now than the first time I attempted changing a colony to another hive.

But the greatest excitement was yet to come. I had never seen a swarm issue, and I was very much afraid that I would not know when they were swarming, for several times I had been mistaken, thinking that the young bees at play were swarms starting out; so I watched and waited until Monday, June 30, between 9 and 10 o'clock, when the washing was ready to be put out, I then looked to see if they were quiet; they were anything *but* quiet; two swarms were out, and I could not tell which colonies they came from.

I presume you can imagine my feelings when I called: "The bees are swarming," and ran to put my armor on. Father was more brave; he went after them, and was stung several times, but thought it was not much after he got used to it.

One swarm returned to the hive it came from. I found the other queen, caged her, and put her at the entrance to a new hive. Soon the bees began to come back, and the dread and excitement of swarming that colony was over. I then had rest—if any person can rest when they are expecting a swarm to issue at any moment—until July 3, when 5 swarms came out within about 10 minutes, and two of them united. Separate they would not. I had not anticipated any such number issuing at once, and had only two hives with foundation in, and I thought of our friend, Mr. Taylor, when his 12 colonies swarmed and alighted in one tree. O, my sympathy was very great for him just then. Why do bees swarm on washing day, or some other time when it is almost impossible to attend to them? And why does more than one swarm issue at a time?

Everything about bees looks very shady if bee-supplies are not bought, and everything made ready for the needed time. When I commenced I had no supplies on hand, and it made it very hard to keep supers filled, hives ready, etc., especially as I had never done anything of the kind before.

In order to gain surplus honey in the sections, I took out one or two brood-frames, and I presume experienced bee-keepers can tell the result. When I looked at them the next time they had put in a frame of their own make wherever I had taken one out. At this time the shadow that hung over my apiary seemed very dark, especially as the drouth was coming on, and I did not dare to remove these combs, for I feared they would lack supplies, but I have learned from experience that this was not a wise plan.

A shadow that has darkened nearly every apiary, and, as I have been told, made this year more discouraging for bee-keepers than has been known for several years, is the short honey-flow which we had, making the average in this part of the State, I believe, 7 pounds, where there were 80 pounds last year.

December 7, the weather being quite cold, the bees were put into Winter quarters in the cellar, with traps set for the mice, if there should be any (a shadow which awaits them). There were many misgivings from "That Husband of Mine," when he concluded it was best to take the bees in; but his courage did not fail, so procuring a partner in distress, who is more afraid than he (though never stung by them, but afraid he will be), they proceeded to take the bees in, and to their great surprise neither was stung, and I think I can depend on one of them, at least, to move the bees in the Spring.

There are 4 or 5 colonies which are short of supplies. As I have several unfinished sections, would it be advisable to feed them back to the bees.

I do not feel discouraged, for with the shadows there have been many lights to help through the dark places; among them are "Langstroth on the Honey-Bee, revised by Dadant," "A Year Among the Bees," by Dr. Miller, and the AMERICAN BEE JOURNAL, and the latter, coming every week, makes a silver lining to many of the clouds in apiculture. The best of all the shadows in bee-keeping is shade in the apiary.

A very bright light which has lightened my labors, and also the expense, is having a husband who is interested in the work, and who makes the hives, supers, and numerous articles needed in the business, which, if bought or hired made, would deduct quite a sum from the profits. I pay him by letting him have all the honey he needs to eat, and think I have made a good bargain.

It is very pleasant to watch the bees bringing in their loads; it is something I never tire of, and as I watch them it teaches me the wonderful love of Him who has created all things.

One light to me, and as pleasant a duty as I have had in caring for the bees, is looking for the queen. I have had people look in amazement when I spoke of it, and said they hardly dare go outside of the door after taking off honey, and would never run the chances of being stung looking for queens. It is a beautiful sight to see the bees clinging in clusters to the comb, and trying to hide their queen.

A great lightening of labor for me is having the queen's wings clipped so that I can get her when they swarm, without running after them. I think I should never have attempted bee-keeping if I could not cage the queen so that the swarm will return to her.

Among the brighter lights, is taking off a super filled with honey, preparing it for market, and then getting from 18 to 20 cents per pound, or using it on the table; it seems to make life sweeter. But the greatest light of all the lights for 1890, is the lightness of the honey crop.—*Read at the Northern Illinois Convention.*

Rockford, Ills.

Fall Work in the Apiary.

E. L. PRATT.

Fall is close upon us, and it is time to commence arrangements for Winter.

Winter cases will be used more this season than ever before, as it is a settled thing that bees will Winter in properly-arranged outside cases safer and cheaper than by any other method.

It matters not how cold your climate is—cold weather does not kill bees, it is frost in and about the cluster.

If the steam arising from a cluster of bees, or breath, as it is sometimes called, is properly taken care of, there will be no loss of bees during Winter or Spring, providing they are strong to start with, and have plenty of stores of either honey or sugar.

Chaff packed into the sides of a Winter case is little better than a single walled hive.

A thick cushion of straw or hay, tucked over the frames, and not coming in contact with the cover or roof, will take all moisture away from the cluster, and pass it gradually off through the ventilators at either end of the case.

The best clustering space is made by tacking wire cloth onto a ⅞ inch rim or frame. This arrangement affords better ventilation, and at the same time makes an excellent Winter passage. It is better than the Hill device, as sugar feeding in Spring can be done to much better advantage, and the bees can be examined at any time without their flying out into the cold to perish.

Six Langstroth combs full of honey will Winter a large colony of bees. If I have any feeding to do I have the food all put into five or six combs, in compact space, rather than distributed through eight or ten combs.

When cold weather comes on I move the full combs toward the middle of the hive; then slip in a frame one-half or two-thirds full for the bees to cluster on. Space all combs ½ inch full.

A colony that forms its cluster at one corner or one end of the brood-nest, will not generally live until Spring. A small colony will often Winter perfectly if clustered at the center of the brood-nest, but they are very apt to work to one side.

It is better to Winter few colonies in good condition, than many in poor condition; therefore, I say, unite all weak colonies now, and make sure of good queens throughout.

Beverly, Mass.

Essential Features of a Bee-Hive.

G. P. MORTON.

The average apiarist, in speaking of modern progress in bee-keeping, is almost sure to place stress on the "hive" as the highest point to be attained in the art of bee-keeping.

That a certain amount of time and talent should be used in this direction, will be agreed to without argument. But to bend every energy in this direction, I think is a mistake. When we investigate the subject, we find that practical bee-keepers are succeeding equally well with the many different makes of hives. This fact alone indicates that good management and adaptability to the business overbalance everything else.

A hive, to facilitate labor, should be simple, easy to manipulate, and of reasonable price. If these points are combined, they will be almost sure to produce a popular hive. I use the simplicity hive, improved, nine frames, or eight frames and a division-board; fill the brood-chamber, use one depth section crates with break-joint honey-board and section support combined, and follow the tiering up plan for comb-honey. For extracted-honey, use same size brood-chambers, with perforated zinc queen-excluder, and tier up two or three stories high with empty combs, nine combs to the story above the brood-chamber.

In taking up the second proposition of my subject, I will be governed by what branch of honey production I want the hive for. If I were working for comb-honey exclusively, I would possibly adopt the eight-frame hive, but do not think I would. I do not like a small hive, especially for the general bee-keeper. They need closer attention; will furnish more destitute colonies in the Fall, and more and smaller swarms than hives of larger capacity.

If I were running for extracted-honey alone, I would, without hesitation, recommend a large hive; the only point of limit would be convenience in handling. But for both comb and extracted-honey from the same apiary, I have adopted a size of hive suited equally well for both kinds of honey, and of uniform size, viz.: the nine-frame simplicity, single-walled hive, with chaff hive for Winter and early Spring protection.

In conclusion I want to be liberal; I want to be found broad in my make up. And I recommend to the beginner, and to those who have not got a movable-frame hive, to secure some reasonably good movable-frame hive, with crates to hold one-pound sections, and learn to succeed with it.—*Read at the Missouri Convention.*

Methods of Introducing Queens.

J. H. ANDRE.

A few days after the swarming season was over I noticed one of my colonies of bees showing the peculiar actions of one without a queen. Thinking to examine it in a day or two, it slipped my memory and was forgotten. Three or four weeks afterward I noticed it was not storing pollen, when colonies in normal condition should be storing it plentifully. I examined it and it was not queenless. Having but a few minutes to spare, I smoked it thoroughly until the bees were stupefied. I then smoked the bees in all the small boxes and shook out the bees and queen at the entrance of the hive. The next day I examined the colony, finding eggs, showing the experiment to be successful.

Another colony of well run hybrids cast a swarm which was returned and the queen destroyed. Some eight days after it swarmed again. The swarm was hived and all bees were driven from the colony the next morning, the frames looked over, queen-cells destroyed, returning the bees driven out, also the swarm, destroying the queens. A laying queen was daubed with honey and run in with the bees, being readily accepted by the bees, notwithstanding I overlooked several cells of full grown queens which were destroyed and thrown out a few days after.

Another one which cast a large swarm, which absconded, was treated the same as No. 2 except the queen and a handful of bees were shaken on the brood-frames before the swarm was returned at the entrance. This was also a success and saved at least a week's time the colony would have been without a laying queen, which it would have lost had it been left to hatch a queen.

Probably one having some knowledge of bees would be successful in introducing either by the thorough smoking plan or by daubing the queen with honey, provided the bees were driven out in the latter case and the queen dropped at the entrance when the swarm was returning, still I only give the experiments for what they are worth, and would not advise beginners to follow them unless they had plenty of queens to experiment with.—*National Stockman.*

Specialist—Thinker—Enthusiast.

JOHN B. GREGORY.

"Things done by halves are never done right." O, that we might all realize what is contained in these words!

Under your own observation, and within your own acquaintance, is there not some farmer who always does things by halves? Does he ever make a study of his business? Is he trying to learn something new daily about his business, which shall be of service to him next season?

Is he what you can call a successful man? Is he rich or poor? Is he wise or ignorant?

A man to be successful in any good undertaking must make a special study of his calling, and go at it as though he intended to get everything that there is in it. He should be a deep thinker, an experimenter, and an enthusiast. But he must not try to learn it all by experiment; he should read the best literature treating on his pursuit; and not only read, but re-read and study such articles as he thinks will be of benefit to him in any way.

Is there anything more painful than to see a farmer who does what little work he has to do on the same plan and in the same way that it was done 75 years ago; and were you to ask him why he did thus and so, he could make only one answer, viz.: "Because father did."

Do we, as bee-keepers, belong to the "Because father did" class? I hope that we do not.

We should know why we do as we do; and also, we should know how to do to get the best results; also we should know what to do. These things may be accomplished only by hard study and deep thought.

There is a place for every man, and a man for every place; and if a man is in the right place he will love his calling.

I would say to all who are engaged in bee-keeping, who do not love their calling, that they had better get into some other business, for ten chances to one, they have mistaken their calling.

To be successful we must not only have thoughts of our own, but we must read the thoughts and experience of others.

To do this we must necessarily read the bee-periodicals. Make yourself a regular subscriber to one, or more if you can, and preserve the numbers of each volume for reference, and refer to them.—*Bee-Keepers' Guide.*

Garrettsville, N. Y.

Black vs. Italian Bees.

JAMES HARKER.

I do not like to hear some people hacking away continually at the poor little black or native bee. Why is it? Have they nothing else to write about, or have they ever tried any other than the fine, golden Italians?

I have been producing honey for the market for nearly 30 years, and I think I know whereof I speak. Either my experience is not like others, or else I never had the good ones they write about so much. I have bought a good many Italian queens, and I think some of them ought to have been pure.

I have tried the black and Italian bees side by side. In the Spring the Italians had the preference, but ere Fall my little black, ugly fellows, beat them all out and out, both in surplus and increase. But, many say, we do not want increase. Very well, I was simply testing them, and all will admit that the blacks do enter the surplus cases more readily, cap their honey whiter, and are more gentle to handle.

Now, what are the advantages of the Italian over the blacks? "Oh, they gather so much more honey, and protect their hives much better," some will say.

Perhaps they do the latter, for I have some Italians that have to be smoked until they are stupid before I can do anything with them.

"They are not pure, they are hybrids," some one says. So they are; and as long as there is Italian blood in them they will fight and protect their hives. It may be I have a good race of my own, for I have a number of colonies which have stored for me 120 pounds in 1-pound sections, and others over 130 pounds, in larger sections, and I will compare my honey with that of any one, I care not who, for quality and appearance. Some of these were prime swarms, others old colonies.

Argyle, Wis.

Convention Notices.

☞ An informal meeting of the New York State Bee-Keepers' Association will be held on the fair grounds, at Syracuse, N. Y., Saturday, Sept. 12, at 1 p.m.
G. H. KNICKERBOCKER, Sec.,
P. H. ELWOOD, Pres. Pine Plains, N. Y.

☞ The Ionia Bee-Keepers' Association will hold its next meeting on Tuesday, Sept. 15, 1891, at Ionia, Mich.
HARMON SMITH, Sec., Ionia, Mich.

☞ The Central Michigan Bee-Keepers' Association will hold their next meeting at Pioneer Rooms, Capitol Building, Lansing, Mich., Wednesday, Sept. 16, 1891, commencing at 9 a.m. A cordial invitation is extended to all.
W. A. BARNES, Sec., Lansing, Mich.

☞ The 5th semi-annual convention of the Missouri State Bee-Keepers' Association will be held at Sedalia, Mo., on Wednesday and Thursday, Oct. 7 and 8, 1891. Rates for those attending are promised at the Sicher and Kaiser Hotels at $1.50 per day each. All persons so desiring are requested to make apiarian exhibits. A cordial invitation to attend the convention is extended to everybody.
J. W. ROUSE, Sec., Mexico, Mo.

☞ The Southwestern Wisconsin Bee-Keepers' Association will hold its next meeting on Wednesday and Thursday, Oct. 14 and 15, 1891, at Fennimore, Grant Co., Wis.
BENJ. E. RICE, Sec., Boscobel, Wis.

Removal.—Circumstances have made it to our advantage to remove to more commodious quarters, and we may hereafter be found at 199, 201 and 203 East Randolph Street—two blocks north and one block east of our former location. Previous to removal we occupied the fifth floor of a building, but we now occupy the *third* floor of a building near the corner of Fifth Avenue and Randolph Street. Our friends are always welcome.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Sept. 12.—New York State, at Syracuse, N. Y.
G. H. Knickerbocker, Sec., Pine Plains, N. Y.

Sept. 15.—Ionia, at Ionia, Mich.
Harmon Smith, Sec., Ionia, Mich.

Sept. 16.—Central Michigan, at Lansing, Mich.
W. A. Barnes, Sec., Lansing, Mich.

Oct. 7, 8.—Missouri State, at Sedalia, Mo.
J. W. Rouse, Sec., Mexico, Mo.

Oct. 14, 15.—S. W. Wisconsin, at Fennimore, Wis.
Benj. E. Rice, Sec., Boscobel, Wis.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—P. H. Elwood....Starkville, N. Y.
SECRETARY—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

Bee and Honey Gossip.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Half a Crop.

My crop of white honey this season is nearly 7,000 pounds, being half a crop. At present, with a profusion of bloom and bees very busy, still each day the colony on the scales grows lighter in weight. JESSE OREN.

Mt. Auburn, Iowa, Aug. 31, 1891.

Cold Weather and Drouth.

My bees have done as well as could be expected. I had 12 colonies, Spring count, which cast 6 prime and 2 after-swarms. I have taken off 125 sections well filled, and have some to extract—say, 25 to 50 pounds. As near as I can ascertain, about 12 pounds per colony will be the extent of the crop up to date. Owing to cold weather and continued drouth, the first crop of alsike clover afforded no nectar, and there was but little in the second crop. I do not allow ants or spiders to come near my hives, nor grass or weeds to grow over 2 inches high within 10 feet of any hive. This is the second poor year for bee-keepers in this locality, and it is rather discouraging to beginners, but it is said that the darkest hour is just before the break of day, and I intend to continue to feed my bees if they require it.

JACOB MOORE.

Ionia, Mich., Sept. 3, 1891.

Heart's-Ease and Red Clover.

Bees wintered fairly well in this vicinity, but although we had profuse fruit bloom, the bees did not gather much nectar from it, owing to the wet weather, which continued until the latter part of July. I had to feed my bees through June, and some in July, and but few of my colonies had any honey on August 1; since then, however, I never saw bees do better. They are working on heart's-ease and red clover. We have very little white clover here yet. If we have no frost in September we will secure a good crop of honey. From 28 colonies I have had but 13 swarms. I have kept the bees from swarming, as I would rather have honey than bees. Some of my colonies are in 10-frame Langstroth hives, tiered up three stories high, and I run these colonies for extracting and comb-honey at the same time. JAMES KINCAID.

Clay Centre, Nebr., Aug. 28, 1891.

Poor Outlook.

My bees are doing very poorly. I had 5 colonies, Spring count, two of which were weak, and have not enough honey stored for Winter, but the remaining 5 colonies of the 7 which I now have are supplied. The honey harvest is about over here. P. J. KREPS.

Carbon Centre, Pa., Sept. 1, 1891.

Species of Mint.

I mail you to-day a box containing a specimen of a plant which grows abundantly in a pasture about 60 rods from my house. The owner of the field, about 15 years ago, seeded it with red-top grass, and this weed came with it. A few bunches at first, but now the weed has entire possession of about six acres, and is spreading fast. No one that I have inquired of has ever seen anything like it. My greatest interest in the plant comes from the fact that it seems to yield considerable honey. It blooms about Aug. 1, and lasts until frost. Bees work on it all day; not so eagerly as on some other plants. but it is always easy to find several bees. It seems to yield no pollen, and the blossom resembles the buckwheat blossom somewhat, except that it has purplish specks. I would like to know the name of this weed, and where it grows naturally, and will gladly answer any questions you may wish to ask concerning it.

EUGENE WILBER.
Conklin Forks, N. Y.

[This is *Pycnanthemum lanceolatum*, one of the mints. I do not know how profuse the nectar flow is from the mints. I know the honey is very nice, and the bees seem always able to get some. It is rare to see mint bloom free from bees. I regard the mint as among the most hopeful plants for experiment. —A. J. COOK.]

Better than for Several Years.

While around my apiary to-day I saw hundreds, if not thousands, of chilled bees not able to reach the hive. Chilled with cold in August, and only a few days ago they were hanging out in great numbers. What extremes of temperature in a few days! We had a splendid season in this section, from about June 15 until July 15, and the bees were gathering large quantities of beautiful, white honey—no dark honey nor bug-juice. I see some persons report a very poor season, almost in this neighborhood, but I must report the best season for several years, although the basswood, which I looked forward to with a good deal of hope, was a total failure in this section.

JAMES HARKER.
Argyle, Wis., Aug. 29, 1891.

Best Season for Ten Years.

We have had the best honey season up to July that we have had for ten years, in this part of the country. My best colonies stored 60 pounds of honey, and cast two swarms each. Although I have got lots of honey, but little of it was No. 1. My bees spoiled the poplar honey by mixing black-gum with it, which made the honey very bitter. They spoiled the white honey by mixing honey-dew with it, of which we had the most that was ever known here—our hives are full of it. I do not know what it will do for our bees this Winter, but as I am not prepared to extract, they will have to winter on it. We have had plenty of rain all season, and crops of all kinds are good. Golden-rod has just begun to bloom, and it looks very promising for a Fall crop of honey—in fact, all of the Fall flowers look fine.

JOSEPH A. WEEKS.
Young's Creek, Ind., Aug. 31, 1891.

[It will probably not be safe to attempt to Winter bees on honey-dew. You had better feed them with sugar syrup, if they do not gather sufficient stores for Winter from the Fall flowers, and keep the honey-dew for feeding the bees next Spring.—ED.]

Bees in the "Dark Continent."

A writer in the *Canadian Bee Journal* for Aug. 1 has raised a question, and friend Jones steps in to say that African bees can sting, and made him run when in Egypt, simply because he treated a few of their companions to a bottle of spirits. I have not tried Punics with spirits, as I do not use them, so cannot say if it will make them bad tempered. We had the Egyptian bee here in Hallamshire 25 years ago, and all who tried them said they were too savage to keep. They were introduced into England and America by the late Mr. Woodbury—the English Langstroth. The bees have yellow bands and grey hairs; species *Apis Faciata*; so they are nothing like Punics—*Apis Niger*. Africa is a very large tract of land, and it is just as fair to call them "African" as it is to call Cyprians, Italians, Carniolans and German bees "European." Punic is the proper name for these black bees, and all classic students will be able to fix the locality on a map of Africa. I have an idea that the number of distinct races of honey-bees in Africa are very many; hence, we must not begin confounding missionary and other reports with the Punic bees. These bees have only to be tried; let them stand or fall on their own merits; to class other bees with them is as fair as classing Cyprians with Italians.

A HALLAMSHIRE BEE-KEEPER.
Sheffield, England.

Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul-brood, can be procured at this office at 25 cents per ounce, by express.

Clubs of 5 New Subscriptions for $4.00 to any addresses. Ten for $7.50.

Wavelets of News.

Bees are Good Helpers.

The bees are good helpers on the farm, return more in proportion to the outlay than any other workers, and should be made as comfortable as possible. It must be remembered that bees not only gather honey, but, also, that in gathering it, they fertilize all the flowers on the farm, thereby increasing their product.

Bees need water, and if there be none near, give it in a shallow pan, with sticks or straws floating on the surface of the water. On these "floats" the bees may drink without drowning.—*Exchange.*

Fall Swarms.

In this locality there has been much rain—much more than usual during the month of August, and vegetation is very rank. This promises Fall honey if nature's laboratory is in running order. Hives are full and running over with bees, and let a flow of nectar occur, swarming will be the order of the day as much as during the month of June. I have known swarms to issue as late as Sept. 20, and fill their hives with comb and honey. The reports of a crop of honey thus far throughout the country show quite a deficiency, and it would be wisdom on the part of bee-keepers to secure every pound of Fall honey possible, in lieu of increase. If I were going to run for extracted-honey this Fall, I would extract what there is in the combs, so as to be sure that there is no honey-dew, and endeavor to obtain a pure article from Fall flowers.—MRS. L. HARRISON, in the *Prairie Farmer.*

Bees and Honey.

The bees have had a busy season of it this Summer. The absence of any prolonged wet weather has enabled them to gather thousands of pounds of sweets, from the fields and gardens.

The question of the bees injuring fruit is again brought up by those who devote more study to horticulture than to bees, but if these same fruit-growers would look to the birds, they would find that they are the natual enemies, and not the bees. The birds are not only the enemies of the fruit-growers, but the enemies of the bee-keepers. If it was not for the great prolificness of the queen-bees, whole colonies of bees would be destroyed by the voracious birds.

So determined do the birds become at times that they follow the bees up to their hives, and watch for their coming out to seize them. The shot-gun is the only appeal for the bee-keeper at such times. In the fields the birds are attracted to the bees, probably for the little sacs of honey which they carry, and not so much for the bees themselves.

The birds are also the chief offenders against the fruit-growers. They pierce the fruit with their bills, and allow the nectar to escape. Decay soon sets in, but the bees are on hand, and sip the juice as it escapes. They never touch sound fruit, but always go for those that have had their skin punctured by the birds, thorns or limbs. All of this escaping nectar is honey lost if the bees were not ready to gather it up. As economizers of waste products the bees are, therefore, unequaled.—HELEN WHARBURDON, in the *Wisconsin Agriculturist.*

Bees and Fruit-Growing.

It is simply an aggravated case of base ingratitude on the part of the fruit-grower if he finds fault with his bee-keeping neighbor on account of the injury done to fruit by bees. The fruit-grower, in fact, has no warmer friend, no more useful agent, than the pollen-carrying, honey-seeking little insect. The interests of fruit-grower and bee-keeper, far from being antagonistic, lie indeed so nearly in the same direction, that we urgently advocate the combine of the two avocations in the same person.

The leading cause of barrenness in fruit trees and bush fruits is lack of proper pollenation, due again, in many cases, to the absence of the right kind of pollen, and in others to its non-transfer from the stamens to the needy pistils. Many trees are not self-fertilizing, either because their own pollen upon their own pistil has no potency, or because the pollen is not discharged at the time when the pistils are receptive. A notable example of the one case is the chestnut, and one of the other case, the wild goose plum at the North. The remedy to be suggested is planting a number of trees or varieties near enough together, so they can furnish what pollen they need to each other.

On the whole, however, we believe that more trees, shrubs and garden plants have to depend on the agency of insects, especially bees and bumble-bees, for the transfer of suitable pollen to the pistils, and thus to become fruitful, than is usually supposed by the average soil-worker. We have recently heard of a number of instances where cherry trees were almost fruitless for a number of years, during which no bees were kept in the vicinity, and all at once began to bear heavy regular crops so soon as an apiary was established near by.

We believe bees are a good thing, and a number of colonies should be kept in or near every orchard.—*Popular Gardening.*

Marketing Honey.

Our honey should be just as we represent it. One-pound sections are the leading packages for comb-honey, put up in 12 and 24-pound crates, with glass on one side. Extracted-honey in 3-pound glass jars, labeled with your name. The market demands good honey, as well as good butter.—W. A. SHAFRIT, in *Northwestern Agriculturist.*

Swarm-Catcher.

We tried an experiment recently in our own bee yard which may suggest to some one an idea for a swarm-catcher which will be much handier than anything we now have, and prevent the bees from alighting in high trees or other inaccessible places.

The discovery happened as follows: In one of our hives we had a division-board across the back, which had been left there by mistake, and had a good deal of comb attached to it. Just as we were removing it, a swarm issued from a neighboring hive, and several of the bees seemed attracted by the comb, and alighted on the division-board which we held in our hand.

An idea struck us that we might use this attraction to advantage, and accordingly we held the board in front of the hive, catching several more bees, and then we carried the division-board with its bees across to a tree upon which a former swarm had alighted, and laid it across the limb with the comb hanging down.

In a very short time the other bees commenced to alight upon it until all were settled down, with the exception of a dozen or so. We then carried the board to the stand we wished to hive the bees upon, the stray ones following us, and set the board in front of the hive.

Only a few minutes elapsed until the bees began to drop off the board and run in the hive, and when the majority had done so we shook off the rest and they followed.

We carried the division-board back to the tree, and set it again upon the limb, and two other swarms have since alighted upon it and been easily hived. The question arises—cannot something valuable be worked out from this idea?—*Canadian Bee Journal.*

Bee-Keeping for Women.

Well, I will not say bee-keeping for ladies exactly, for the world now knows the definition of lady as one not accustomed to work. So it will not do here. Lady friends, bee-keeping is not so very hard after all, if one takes an interest in it. I do more work in my apiary than any two men I could hire around here.

Let us believe that bee-keeping belongs to women; anyhow, it is generally in the yard and around the house like chickens, calves, etc. And I would especially advise women in delicate health to take up the care of bees as a tonic, and you will find it a good one, too.

If I was shut in-doors all the time I would soon be in bed half of my time. Get you a few colonies of bees in some movable-comb hives. We use the simplicity, but any frame hive, not too heavy or large, is all right. By all means have your hives and frames all uniform.

Experiment with queen-rearing; study the flowers that produce honey; note their time of blooming, etc., get interested, and you will soon feel like a new being, and have honey to sweeten the whole family. I am very busy at this time. Will try to give you some interesting reading soon.—MRS. JENNIE ATCHLEY, in *Southern Horticulturist.*

Farmersville, Texas.

When Writing a letter be sure to sign it. Too often we get letters with the name of the post-office, but no County or State. One such came recently, and we looked into the Postal Guide and found there were places by that name in 13 States. That order for goods will have to wait until another letter comes to give the proper address. Be sure to stamp your letter, or it may go to the dead letter office.

Red Labels are quite attractive for Pails which hold from 1 to 10 lbs. of honey. Price, $1.00 per hundred, with name and address printed. Sample free.

THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
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THOMAS G. NEWMAN,
EDITOR.

Vol. XXVIII. Sept. 17, 1891. No. 12.

Editorial Buzzings.

Canada has realized but a poor honey crop this year, on an average. In some localities there was a liberal yield; in others, but little was gathered. This is a summing up of the reports received at this office.

◆

The Corn Palace at Sioux City opens on Oct. 1, and closes on Oct. 17. What arrangements have been made for an exhibit of honey? We have heard of none. There certainly ought to be an apiarian exhibit there.

◆

August was a good month for the apiarists in some localities. The Nebraska *Bee-Keeper* says that it was the best month in the year in that State—giving "more honey and more swarms." In other localities no honey worth mentioning has been gathered since June.

The Accident which happened to Mr. F. H. Macpherson, assistant editor of the *Canadian Bee Journal*, several months ago, has proved itself to be more serious than was at first anticipated. The last issue of that periodical contains the following notice:

> Latest reports from Mr. F. H. Macpherson, say that he has not yet recovered. He has severed his connection with the D. A. Jones Co., and also his assistant editorship of the *Journal*. We hope a few months more rest will restore him to his former vigor.

◆

Ground Cork is superior to chaff for cushions to cover frames during Winter. It absorbs more moisture than chaff, and retains the heat. It does not become moldy, and is quite inexpensive. It can be obtained at this office.

◆

The Honey Crop is not abundant this year anywhere. *Gleanings* for Sept. 1 gives us the following item: "A correspondent writes: 'Only a small portion of the California bee-keepers are happy this year, as the honey crop is almost an entire failure. San Diego County,' he adds, 'sends in the best report; but there is only one-fourth of a crop for other sections.' While this is discouraging for California bee-keepers, it means a stiffening of prices on *eastern* honey—a fact that our producers should bear in mind, as well as commission merchants."

◆

As a Trade-Mark for honey, there can be nothing better than excellence of the commodity, with a nice label, giving the apiarist's name and address.

◆

Beebee Beebee is the name of a resident of Beeville, Bee County, Texas. That State is a great country for bees, and it is no wonder that Bee County should have so many bees in its hive of industry.

The Union is again on top! The lawsuit at Canton, Ills., is ended! The enemies of the bees had no case, and the Judge kicked it out of court. The facts were detailed on pages 41 and 74 of this volume. The attorneys for the Union give these details of the case:

> At the request of Mr. Cole we write you concerning the outcome of the most wicked conspiracy against him, and the great interest of bee-keeping in this part of the country.
>
> At the commencement of the present term in our Circuit Court, Mr. Shaffer and his minions were on hand, ready to annoy and perplex the defendant, and by a great show of eagerness to reach the case, and also to secure an indictment by the grand jury, endeavor to "bluff" him and induce him to abandon his defense.
>
> Matters stood thus until the commencement of the call of the criminal docket, when a change of base was made and different tactics were employed. When the case was reached on the docket, all that was necessary was to call the attention of the court to the statute under which the persecution was commenced, together with the citation of an authority or two, of which we had a most comprehensive brief, and he at once told the State's attorney that the suit could not be maintained, and ordered that it be dismissed. Even the attorneys who appeared before the justice, admitted, in the face of these, that no action could be maintained. And thus ends the most miserable apology of a prosecution with which Mr. Cole has been inflicted.
>
> It may not be out of place to say that had it not been for the persistent efforts which were made, the result would have been otherwise. We devoted a great deal of time and attention to this matter, and were prepared to make a bitter struggle. They also endeavored to get an indictment against Mr. C., but in this they also failed. With this farcial ending, the celebrated bee case terminated.

* * *

Burr-Combs.—The Missouri *Bee-Keeper* says that thick top-bars are a great improvement; and although there were a few brace-combs—or, as we now distinguish them, burr-combs—there were not enough to justify the use of a honey-board.—*Gleanings*.

Chicago Exposition.—The Nineteenth Annual Exhibition of the Inter-State Industrial Exposition was opened yesterday, Sept. 16, and will close on Oct. 24. The great building has been completely and fully decorated, and all available space allotted to intending exhibitors, for what promises to be the most complete and magnificent exhibition in its long history.

The Cook County Agricultural and Horticultural Society, with a prize list running into the thousands of dollars, have undertaken a floral display that has never been equaled in this country.

In the building will be also exhibited an exact reproduction in miniature of the Buildings and Grounds of the World's Columbian Exposition, with magnificent electric effects; covering as it does a space of 5,000 square feet, it is one of the wonders of modern mechanical art, and will be worth a journey to see.

The Lincoln Log Cabin Association will also be exhibitors.

All railroads transport passengers at excursion rates.

* * *

Winter Clamp.—Mr. A. Newland thus describes his clamp for wintering bees, in the *Orange Judd Farmer*:

> Dig a trench in the ground deep enough to allow the hives to be below the surface of the ground, and wide enough to receive two rows of hives. Set the hives into the trench, making the two rows face each other. Open the tops a little, screening the openings to keep out mice, etc. Lay timbers across the trench, and cover it over with boards. Place a ventilating tube at either end of the trench, making one taller than the other. These can be made by nailing fence boards together. They should be screened also. Pile straw on the board cover of the trench, and throw up dirt around this like a potato pit. The bees will live upon half the honey required to winter them when unprotected, and very few will die, therefore you will have early and large swarms. This is the most successful plan I have tried. In Iowa, when 75 per cent. of the bees died, I lost none. I have kept bees thus four months without lifting.

Golden-Rod, for the National Flower, was the choice of the Lady Managers of the World's Fair, at their meeting on the 9th inst., like the rose of England, the lily of France, the shamrock of Ireland, the thistle of Scotland, and the leek of Wales.

The rich yellow bloom of the gorgeous golden-rod, took precedence of the three other flowers—the sunflower, the trailing arbutus, and the clematis. The golden-rod was the favorite of Mrs. Cantrill, who maintained that it typified American citizens in several ways. "It makes glad the waste places," she said, "and blooms cheerily in rich and poor soil. The golden-rod favors no particular place, but rears its beautiful blossoms in every State, in the dry atmosphere of Arizona, and on the bleaker plains of the extreme Northwest. It never wilts, for its stem, loaded with glorious blossoms, is firm, and withstands the severest storms. This is why it is indicative of the nature of the American citizen. It bends before the storm, and arises again in all its beauty, and bids defiance to the winds. It gives its golden blossoms to the arid plains, and extends its beauty to places forgotten by the human race. And wherever it rises above the soil, it breathes its fragrance all around."

This is also the choice of bee-keepers, and they admire the good sense of the Lady Managers in their appreciation of the beautiful golden-rod. We hope the Lady Managers, at their next meeting, will decide to press its adoption as the National Flower of the United States.

◆

Siam has decided to make an exhibit at the World's Fair at Chicago, which shall eclipse the one it made at the Paris Exposition, where it carried off the honors in the oriental section.

◆

Honey should not be sent by express unless the distance is very short. It costs 3 or 4 times as much for transportation, and is handled just as roughly as if sent by freight.

The Detroit Exposition was held as usual in the last week of August. We expect soon to present a description of the honey exhibit to our readers. Meanwhile here is an amusing item concerning one of the exhibitors, which appeared in the Detroit *Tribune* of Aug. 24, and has been copied into many other papers since that. It reads thus:

A tall man, with bushy, black whiskers, entered the Cadillac Hotel, and, while he was registering, placed a long, narrow valise on the counter. A spring in the valise seemed to have given away, and a little door at the side suddenly flew open, disclosing to the eyes of the bystanders thousands of bees on a honey-comb.

There was a small stampede among those standing about the counter at first, but all fears were allayed when the tall stranger explained that "they couldn't get out, and wouldn't do any harm if they did."

He then delivered a short lecture upon the bee and its habits, that proved very interesting, and drew quite a crowd for a few minutes.

He said that his name was J. F. Michael, from German, Ohio, where he has a large bee-farm. He is here visiting the Exposition, and brought his box of fine Italians that he might compare notes with some of the exhibitors.

When some one asked him to show the queen, Mr. Michael dived into a capacious pocket and produced a handful of little boxes, each of which contained half a dozen worker-bees and a queen.

"Great guns! man," exclaimed a traveling man, "are you a walking beehive?"

"Oh, no," he responded, "by no means. These are just a few of my pets that I carry around to show the people. You see each one of these little boxes has a queen in it. They are somewhat particular as to their society, and I have put these other fellows in to keep them company."

◆

Polygonum, also called heart's-ease, black-heart, or smart-weed, in most localities of the latitude of Illinois blooms by the middle of August. It is a good honey-plant, belonging to the buckwheat family, and yields a white honey of sharp flavor, disliked by some persons.

Illinois Bee-Keepers' interests are located with the horticulturists in the coming World's Columbian Fair. The Committee on Horticulture for Illinois met in Chicago on the 9th inst., to consider the needs of the several departments.

Representatives of the several divisions of the Horticulture Society of the State were present, together with the World's Fair Committee of the State Horticultural Society. They discussed at considerable length the proposed exhibit, and determined upon its scope. The information obtained will be submitted by the committee to the commission at its October meeting. Owing to the limited area assigned to Illinois, it will be necessary to restrict the exhibit so far as growing trees are concerned.

The committee will recommend the appointment of a Superintendent of Horticulture for the State at large, and an assistant for each of the three grand divisions, with suggestions as to the amount of their compensation. The sum of $40,000 is asked for the expenses of the department.

◆

This is one of the many excellent recipes in the Honey Almanac for this year, and is called the "Honey and Tar Cough Candy":

> Boil a doublehandful of green hoarhound in two quarts of water down to one quart; strain, and add to this tea two cups of extracted-honey and a tablespoonful each of lard and tar. Boil down to a candy, but not enough to make it brittle. Begin to eat this, increase from a piece the size of a pea, to as much as can be relished. It is an excellent cough candy and always gives relief in a short time.

We have tried the above recipe and know it to be excellent for a cough, that one has when getting over that terrible Russian malady—*la grippe.*—EDITOR of the *Southern Horticulturist.*

We cheerfully commend this remedy to Bro. Root, who is now having a tussel with that monster.

Soil has much influence upon nectar secretions in flowers. A correspondent in the *Prairie Farmer* states an interesting point in this direction, as follows:

> A bee-keeper—a close observer of nature—told me of late that he noticed bees working continually on a patch of white clover, on sod which had not been disturbed for a long time, and adjacent to it was a patch on ground that had been thrown out in laying the foundation for a building, and he never noticed a bee upon it, thus showing that good, moist, rich land produces honey from clover, while hard, sandy land does not.

◆

This is What the Western *Plowman* remarks concerning the latest invention for bee-keepers:

> Our bee editor, C. H. Dibbern, has invented a new and successful "bee-escape," and is thus keeping abreast of the times, and in harmony with the spirit of the age which demands something better to-day than we had yesterday.
>
> Mr. Dibbern is an enthusiast on apiculture, but he is something more. He is practical and progressive. He thinks, studies, investigates and tests; and, in consequence, when he arrives at a particular result, the chances are that it is as near right as can be secured.

◆

Adam's Bees have come to light at this late day. *Revista Apicola*, the Spanish bee-periodical published in the Island of Minorca, says that Prof. Herr, of Zurich, has discovered 844 species of fossil insects which date back to the tertiary period. Among these is found a bee, well preserved, which has been added to the museum. Its size is half that of the present bee. Its tongue, wings and abdomen are well defined, and also its composite eyes and two simple ones. Prof. Herr has named it *Apis Adamitica* (bee of Adam), and he considers it the progenitor of the present bees.

◆

The Little Busy Bee was not well rewarded for diligence this year. The crop is not over one-fourth of an ordinary out-put.

Queries and Replies.

Wedges or Screws for Holding Sections.

QUERY 784.—1. Where a person uses a section case with solid sides and ends, and a slat bottom, is it advisable to have it large enough to have a follower to key up the sections; if so, which is best to key up with, wedges or set screws? 2. If wedges, how should they be made to have them easily removed? 3. If set screws, which are best wood or iron, taking into cousideration cost and convenience?—Iowa.

1. Screws. 3. Iron, if properly made, with large, wide thread.—R. L. TAYLOR.

1. I do not like such a section case, and have had no experience with wedges, etc.—G. M. DOOLITTLE.

1. Use a follower with set screws, but the question is not indisputable. 3. Wooden screws.—DADANT & SON.

1. Yes. Wedges are the best. 2. They should fit into a wedge-shaped groove in the follower.—G. L. TINKER.

1. Yes; unless everything is very exact, I should prefer set screws and a follower. 3. Wood, boiled in oil.—C. H. DIBBERN.

1. Yes, by all means. Use wedges. 2. A little experience will determine the proper size. 3. Wood is better every way.—M. MAHIN.

1. I have tried wedges, and like them. 2. The wedges I use are really not wedges at all, but straight sticks big enough to crowd in.—C. C. MILLER.

1. No. Do not use any follower. 2. Set screws are very much superior to wedges. 3. Wood are best, because cheaper, and operated faster.—JAMES HEDDON.

1. I prefer wedges. 2. Make the followers wedge-shaped, and the wedges with the same slant. 3. If I were to use screws, I should perfer wood.—A. B. MASON.

1. I do not use a follower, and have no trouble to remove filled sections from the kind of case to which you refer. If you must use one, use the wedge to key it up.—J. P. H. BROWN.

1. I think it advisable to use a follower, and key up with wedges. Simplicity is a good rule in the apiary. 2. The wedges should be thin. 3. I think wood is best, although I have never used iron.—A. J. COOK.

1. Wedges. 2. With a little projection, so that they could be loosened with a tap from a hammer. 3. Iron, unless made like Heddon's, so that they could be thrown in Lake Michigan and not swell.—MRS. L. HARRISON.

1. I do not consider it necessary. One advantage in keying up is to drive the sections so close together that propolis cannot be pushed between them. Wedges answer the purpose very well. 2. I use, principally, broken sections, split into narrow strips.—EUGENE SECOR.

1. I should key up with wedges in all cases. They are less expensive than screws, and are not affected by changeable temperature. 2. It will not require much inventive genius to make a few wedges that will answer the purpose, and be easily removed. 3. I think iron would be preferable, both in the matter of cost and convenience.—J. E. POND.

1. I do not want a "follower" in my section cases. They add to the number of loose traps to take care of, and to the work of cleaning. I decide what width of section I want to use, and make the cases just right to take them, using a slip from a section as a wedge to tighten up the sections. "Thumb screws" make to much "fixing" to my taste. I do not like slats at the bottom of my cases. They are hard to clean, and smash bees.—G. W. DEMAREE.

1. Either may be successfully used according to the notion of the apiarist, and the operator being accustomed to their use. 2. If the follower and wedge are of the same bevel they will hold all together more perfectly, and also may be readily removed. 3. Wood screws are cheaper, and will answer every purpose. —THE EDITOR.

Texas will have an exhibit costing $300,000 at the World's Fair. In a circular the committee remarks thus:

> Texas must not fail to participate in an exhibition costing nearly fifty millions of dollars; one in which every nation and commonwealth in the world will be represented, and where she can show her vast resources to fifty millions of visitors, which means in five years a million new people, and five hundred millions more money to circulate in our State.

Telling It to the Bees.

Out of the house where the slumberer lay
Grandfather came one Summer day,
And under the pleasant orchard trees
He spake this wise to the murmuring bees :
"The clover bloom that kissed her feet
And the posie bed where she used to play
Have honey store, but none so sweet
As ere our little one went away.
O bees, sing soft, and bees, sing low,
For she is gone who loved you so !"

O gentle bees, I have come to say
That grandfather fell asleep to-day,
And we know by the smile on grandfather's face,
He has found his dear one's hiding place.
So bees, sing soft, and bees, sing low,
As over the honey fields you sweep ;
To the trees a-bloom and the flowers a-blow,
Sing of grandfather fast asleep.
And ever beneath these orchard trees
Find cheer and shelter, gentle bees.

Topics of Interest.

Peculiarities of Abnormal Bees.

PROF. A. J. COOK.*

Monstrosities among plants or animals possess a greater interest now than formerly. Since the theory of Progressive Development has become the working theory in every biological laboratory, abnormal characteristics like those to be herein described, are viewed with exceeding interest. They may be cases of arrested development, or possibly of acceleration, where organs, usually abortive, have attained a larger growth. As if by extreme ativism we had a glimpse of an earlier condition before the organ was whittled away, before the agency of non-use or ill-adaptation had weakened or destroyed them. We now look at any case of abnormality among any group of organisms, as possibly a key to some important organic solution, and so very worthy of study and record.

Bees offer excellent opportunity for such observation and study, as the observant bee-keeper has opportunity to study thousands of specimens in a short space of time. Thus we should not be surprised that curious malformations are not infrequently discovered. It is my purpose at this time to describe several malformed bees which I have examined, and which are now in the collections at the Michigan Agricultural College.

During the past season, I received from Iowa, and a little later from Wisconsin, some cyclopean bees, in so far that they had but one eye and no ocelli. These bees in the conformation of the head, mouth-organs, antennæ, legs and abdomen, are normal workers, but instead of two eyes on the sides of the head, and three ocelli on the vertex, there is but one eye. This is crescentic in form, and is situated symmetrically and centrally high up on the epicranium. The highest or central portion of this eye is about as wide as is the vertex back of it. The horns of the crescent are quite acute, and reach down on the sides of the head, to a point opposite the attachment of the antennæ. The eye is normal in respect to its dense covering of hairs. In most cases, this single eye is uniformly rounded behind, though in one specimen from Wisconsin, and two from Iowa, there is a sharp angular projection high up, behind, which fits into a corresponding emargination in the central anterior border of the vertex. In one or two others there is a slight central posterior projection, but not a sharp angle, as in the cases just referred to.

I received eight such bees from Wisconsin, and six from Iowa. All in each case were from one hive, and so the progeny of the same queen.

Another peculiarity which I have studied, also relates to eyes, but here it is confined to the drones. These male bees were from Florida, and all from a single hive, and so had a common mother. I think all the drones of this hive were alike abnormal. In these drones, the eyes were entirely destitute of pigment. Not only the eyes, but the hairs borne upon them, are entirely white. The three ocelli are likewise without color. The hairs on the face are also lighter than we commonly find them, though I could not see that the remaining hairs of the body were thus marked. We thus see that these drones in respect to eyes are albinos. It is interesting to note that they were from one queen. I think cases are not rare, where two or more offspring of a single parent, among higher animals—even among children of the human kind—are albinos.

Albino insects are not common, though I have seen albino crickets, *Gryllus luctuosus*, and have in our collection an albino cockroach, *Platamodes Pennsylvanica.* Sports, however, in the direction of albinoism, are quite common among bees. Thus, all the races of our honey-bees frequently show specimens which are conspicuously ringed with white hairs. This is a marked peculiarity of the Carniolan variety of the German race. Enterprising breeders of bees have taken advantage of such sports among Italian bees, and by selection in breeding, have established a well marked variety known as the Albino bees. If albinoism is a diseased condition, in which the tissues fail to secrete pigment, and if by breeding it can be continued and even fixed, as the above seems to indicate, then surely some diseases are hereditary. This fact has interest bearing on the intermarriage of albinos, and the social questions involved.

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*Read before the Biological Section of the American Association for the Advancement of Science, at Washington, D. C., Aug. 21, 1891.

I believe there are no truly monœcious insects, no real hermaphrodites in this subclass of arthropods. There are, however, not uncommonly, bees that are in some respects like males, and in others like the workers, or abortive females.

As is well known, the male or drone bees differ very decidedly from the workers or undeveloped females. The males have toothed mandibles, short maxillæ and labium, eyes that meet above, ocelli thrown forward, robust abdomens, and legs without the pollen baskets.

On the other hand, the mandible of the worker is untoothed, the maxillæ are long, the ligula very long, the eyes do not meet above, and the ocelli are thrown back on the vertex; the abdomen is more slight than in the drones, and on the outside of the posterior legs are the curious modifications for conveying pollen.

Thus it will be seen that there are many characteristics that enable us quickly to distinguish the drone bees from the workers, aside from the actual reproductive organs.

Now, it is common, or not rare, to find bees that combine these characteristics—that is, in some respects, the bees will be like drones, in others like workers; though, in nearly all cases, I think the real sexual system will be either male or female, and will generally, if not always, correspond with the abdomen. If the abdomen is robust or heavy, we find no sting, a peculiarly female appendage, but do find the male reproductive organs. While if the abdomen is slight, we find a sting and abortive ovaries, which are always present in the worker-bee.

Aside from this constant arrangement—agreement of style of abdomen and sex organs—I have specimens to illustrate nearly every combination: Drone head and thorax, and worker abdomen; drone eyes, and worker mouth organs, thorax and abdomen; worker head and thorax, and drone abdomen, and so on with almost every conceivable combination, even to one entire side, which is drone, and the other side worker, until we reach the abdomen, when all is worker.

I have observed this fact, that when a colony gives us one of these bees, it is pretty sure to give us several. Thus, it would seem that the malformation comes through some lack or diseased condition of the parent bees.

It is positively known that the male, or drone bee, is the result of agamic reproduction. In other words, the unimpregnated bee egg will develop, and always produces a male. Thus, some workers, called laying workers, cannot mate, but do lay eggs. These will develop and always produce drones. Queens often lay eggs before mating, which develop into drones. Old queens often become drone producers, as the spermatheca becomes empty of sperm-cells. The microscope never finds sperm-cells in the eggs that are placed in drone-cells. Thus, we believe that a queen can and does voluntarily control the passage of sperm-cells from the spermatheca as the egg passes by. If to be placed in a worker or queen-cell, she opens the door of the spermatheca, and the ever-active spermatozoa push out to become incorporated with the egg, and we have a female. If, on the other hand, the door is kept closed, no sperm-cell passes, and a drone is the result.

The amount and quality of the food fed to the drone and worker, is not much different, so we have every reason to believe that the fact of impregnation determines the development, so that female or male is the result. Both von Liebold and Leuckart state that they found several sperm-cells in a single bee egg.

If this be true—and it surely seems likely, for how could a queen control so delicate an organization as the spermatheca, so as to let but a single cell pass—then may it not be that more than one sperm-cell is required to impregnate the egg so as to produce a female, and that owing to a faulty organism, even some drone eggs—eggs that will produce drones—received a single sperm-cell (or may be more), and thus, through partial impregnation, we have these apparent hermaphrodites! It is, however, the commonly accepted belief among scien tists to-day, that only one sperm-cell enters the egg in any case of successful impregnation.

Were it not that investigation seems to make it certain that in vertebrates only one spermatozoa passes into the egg, we should wonder if it might not be true that the number of sperm-cells, few or many, did not determine sex in higher animals, the few producing males, and more females.

Agricultural College, Mich.

Storing Honey, Honey-Plants, Etc.

S. L. WATKINS.

One of the best planned honey-houses I ever saw belonged to Mr. Adam Warner, of Clarksburg, Yolo County, Calif. It was a two-story building, size, about 12x30; the outside boarded with rustic, the inside lined with flooring, tongue and groove, which made a house perfectly bee-tight. The cost, he informed me, was about $300. The upstairs part of the building he used for a workshop, where he put his hives and one-piece sections together. The lower part of the building was divided into two rooms; one room was for storing honey and preparing it for market, the other a kind of a wax-room where he melted his wax, and where he intended making his comb-foundation.

He had quite a novel arrangement for keeping ants out of the honey-house, which he assured me worked first rate.

He had the foundation posts of the building setting in small cans of tar. (He had taken an ordinary five-gallon oil can and cut it off about four inches from the bottom, making a can almost four inches deep.) The building stood up off of the ground about two feet; eighteen inches of that distance was mason work, and the other six inches foundation posts, resting in cans of tar.

I asked him if the ants would not crawl over the tar after it became hardened with the influence of the weather, and he informed me that they would not; he said that once a month he stirred the tar up a little with a stick.

I think it is the smell of tar, more than their fear of crawling over it, that keeps them from crossing.

I looked well while I was there to see if I could find any ants attempting to cross it, but I did not notice any.

HONEY-PLANTS OF SACRAMENTO VALLEY.

The bee-pasturage in the Sacramento Valley is getting better every year, as more land is being set to alfalfa and fruit.

I find that the principal honey-plants of Sacramento, Yolo and adjoining valley counties are wild grapes, wild rose, swamp willow, alfalfa, clover, Spanish-needle, sycamore, several different varieties of mint, fruit bloom, corn, wild chicory, button bush, white button willow and Canada thistle.

This last, the Canada thistle, has got a pretty good start in that country in the pastures and waste pieces of land. Canada thistles are excellent honey-plants.

The levees in that section of the country have a thick set growth of alfalfa on both sides, which, it is claimed by some, help to strengthen the levees against the high waters in the Winter time, while by others it is claimed that growing alfalfa on the sides of the levees is a nuisance and a damage; that the gophers tunnel the levees searching for the roots of the alfalfa, and thus undermine it, and make it insecure against the high waters.

Last Winter, and until late in the Spring, the bee-pasturage was flooded with water, and bees did not do very well this last season.

Mr. Warner has his apiaries elevated from the ground from 8 to 12 feet. He has a good strong platform made, which is about six feet wide at the top. He places about 50 hives on a platform. All the hives set side by side, and all are painted red, and he tells me that the bees never have any trouble in discerning or finding the right hive. Underneath the platform I saw where he had taken off a great number of combs, where the bees, after filling their hives, had commenced building out in the open air. Colonies had built side by side, and I suppose on warm days the bees of one colony must have surely intermixed with the bees of another.

If bees were inclined to rob in that location like they do in some places, the bee-keeper would have endless trouble by the colonies building out in the open air, but Mr. Warner informs me that he has never been troubled by bees robbing. They always seem to have sufficient pasturage to keep them out of mischief.

I asked him if he did not lose a good many queens by having the hives set so close together, and he informed me that he rarely if ever lost a queen that way.

All his hives are the Harbison style, and open at the top and back. We opened several; they all seemed to have an abundance of bees and honey. All Mr. Warner's apiaries were surrounded by water until late in the season this year, and as a consequence a great many bees were lost in the water.

Mr. Warner keeps from 250 to 300 colonies of bees, all of them elevated from 8 to 12 feet above the ground.—*Rural Press*.

Grizzly Flats, Calif.

Eastern Kentucky for Bee-Keeping.

W. W. DUFFIELD.

I am not a professional bee-keeper, but have kept a few colonies for the pleasure of studying their peculiarities, and to this end have given all the time I could spare from the somewhat active profession of a civil engineer. My present apiary is limited to 2 colonies of five-banded Italians, and one nucleus of the new black, or Punic, bee.

This mountain region of eastern Kentucky is admirably adapted to bee-keeping. The latitude of Pineville is 36° 44′ north, but it has a much milder climate than its latitude warrants. At the base of the mountain both flora and fauna are subtropical. The pecan nut and scuppernong grape both ripen in the valley, but the summits of the mountains are covered with the sugar maple and balsam fir of Lake Superior. The opossum, wild cat, large glow worm and black scorpion are found in the valley, but on the summit of the mountain the lynx and porcupine live among the rocky cliffs.

Between the flora at the base and the summit of the mountains, there is an interval of nearly three weeks in the matter of bloom. The white clover at the base of the mountain blossoms as early as April 10, but is not found in bloom at the summit prior to May 1. The mountain sides are still covered with a heavy growth of forest, with the poplar or tulip tree, the basswood or linden, the service berry, the persimmon, wild cherry, wild plum, maples, and chestnut, all of which furnish abundant forage, and as they blossom successively for a period of three weeks between the base and summit of the mountains, this gives a much longer period in which to gather this rich harvest.

The mild climate of the Upper Cumberland Valley is due to the peculiar topography of that region. The valley lies nearly east and west, and thus receives the early morning and late evening sun of Winter, and the high peaks of the Kentucky Ridge—the dividing crest between the Kentucky and Cumberland Rivers — interpose their broad shoulders between the cold winds of the north and this sheltered valley, and turn them westward to bear their ice and snow down the Mississippi Valley as far south as the plains of Texas.

I have frequently, in a ride of thirty miles in the saddle, passed from mid-winter to midsummer, leaving the Red Bird (a tributary of the Kentucky River) still covered with snow, and with eight inches of ice upon the streams, but on crossing the Kentucky Ridge, and descending its southern slope, have found the Cumberland Valley not only free from every vestige of ice and snow, but the air mild and warm, and filled with the insect life of Summer, dancing in the bright sunshine.

Bees abound in this region, both wild and domesticated. Every settler has them, and some settlers have several hundred colonies. Their method of bee-keeping is of the most primitive character. Except my own, no movable-frame hive is known in this region, and the bees are all the common black bee, captured originally in the forest.

The hives are the hollow log of the sweet gum tree, with a plank cover on top kept in position by a heavy stone, and plastered about the sides with clay. Whenever honey is desired the bees are subdued with smoke, the stone removed, the top taken off, and the required honey cut out from the upper portion of the hive. This, in mountain parlance, is known as "robbing the gum." Living among these people, but not with them, occupying my own tent and camp, and constantly on the move, I have always procured honey at all seasons of the year, and while watching this primitive method of robbing the bees, have gained two valuable items of knowledge, to-wit: the correct width of bee-space, and a safe method of wintering on the summer stands.

Whenever a "gum" was being "robbed" for my benefit, I have carefully measured the distance separating the sheets of comb. No matter whether these sheets were in a straight or curved line, they were invariably parallel with each other, and never greater than 7/16 of an inch, nor less than 5/16 of an inch apart. The mean of these distances is ⅜ of an inch, and as this interval permits bees while crawling over two adjacent combs to pass without colliding, I am very confident that ⅜ of an inch is the correct bee-space.

In the Kentucky River Valley the Winter is more severe, and the cold more intense than that of the Cumberland, and the Kentucky River bee-keepers lose more colonies in Winter than their Cumberland neighbors. The success or failure with bees in both valleys is regarded as a pure matter of luck. If the Kentucky River men have good luck, their loss in Winter will not exceed 10 per cent., but if their luck has been bad, their loss may be from 50 to 75 per cent.

In the Cumberland Valley, where ice is seldom seen, and the thermometer rarely falls below 30° above zero, the bee-keeper's luck in wintering is much better, the loss seldom exceeding 1 per cent. But the Winter of 1886 was an exceptionally severe one in the Cumberland Valley, and on the night of Jan. 23 the thermometer fell to 16° below zero, and continued at that point for three consecutive days. Every Cumberland Valley bee-keeper had bad luck that year, and the loss was between 75 and 80 per cent. But in the Spring, when the dead bees were being cleared out, and the combs melted into wax, I noticed this remarkable fact: Those colonies which had not been robbed at all, or only in the early Summer, were all dead. They had not starved, as all had a liberal supply of sealed honey still left. But those colonies which had been robbed late in the Fall invariably came through all right, and, strange as it may seem, they were the only colonies which survived the Winter. There was no exception to this rule in both the Kentucky and Cumberland Valleys.

I can account for this remarkable fact in this manner alone: Wax is a non-conductor of heat, and in the unrobbed hives the sheets of comb separated the bees into thin layers, and spread them over a large surface. They could not mass together in sufficient numbers to keep the temperature above the freezing point (32° above), and were therefore all frozen. But where the hives had been robbed in the Fall, the bees had been unable to replace the loss. Hence, there were no sheets of comb in the top of these hives. The space robbed of its comb and honey formed a clustering chamber, where the bees could mass together, without being separated by sheets of comb, and thus keep the temperature above the freezing point, and survive the period of cold.

If then, the lower portion of the hive, or brood-nest, is protected with double walls, and the intervening space filled with chaff or dry sawdust, and a clustering chamber above the tops of the frames provided in the super, or upper portion of the hive, where the bees can mass together without being separated by the sheets of comb; and the space around and above such clustering chamber filled with closely packed hay or straw, and sufficient upward ventilation through the top of the clustering chamber and top of hive given to carry off the moisture of the bees' breath, without allowing too great a rush of cold air through the cluster of bees to chill them, I am confident that bees may be successfully wintered on the summer stands much better than by placing them in the cellar.

The necessary ventilation can be given by three holes, each one inch in diameter, covered with wire-gauze along the top of the clustering chamber, and each half an inch in diameter, with wire-gauze over the inside, such holes to be bored in the front and rear of the cap, and close to the roof-board, and by allowing 1½ inches of open space in the lower entrance. The super and cap, tightly packed with hay or straw, will prevent any rush of cold air through the cluster, but would allow sufficient to carry off the moisture of the bees' breath. In very severe weather, when the thermometer falls below zero, these half-inch holes may be partially closed with plugs from the outside of the hive, such plugs to have an eighth of an inch hole in the center.

Pineville, Ky.

Colorado as a Location for Bees.

D. R. EMERY.

The best native honey-plants and flowers of California are being destroyed by plowing and too much irrigation. The cultivated flowers and many fruit-blossoms do not seem to have much if any honey in them. Along the larger streams it is rather foggy; and in other places, the ocean breezes are rather chilly for comfort.

In Colorado, the pure, light air, and much sunshine seems to give a spice and flavor to fruit and flowers, and exhilarating life to man. Here the more alfalfa and fruit are planted, the better will be the profit received.

Now, then, lovers of Colorado and bees, what is our duty? It is to let the world know of this God-favored land, and how to most simply and practically make a good honest living for a family, on a small amount of land. One self-supporting family on a town lot, or a few acres near town or city, is worth more to such city and State than a whole basement or garret-full of the riff-raff and scum of the earth. Let us all theorize and practice, and then compile and publish the best ways and means of making a fair living and happy homes. This will help all around, and cultivate the good and useful in humanity.

From my experience and observation, I would take five acres as a standard homestead within two miles of town, plant two acres in alfalfa; the rest in fruit, principally apples and native plums.

Build the house near the front center, and intersperse the orchard with the stables, poultry and bee-houses. The same ground will raise fruit, poultry and bees. The chickens will help gather the bugs, worms and decaying fruit, and the bees will help fertilize the bloom, and collect and store hundreds of pounds of honey. Also keep a horse, two cows and pigs, and live like a true, independent American sovereign.

To lay by money, enlarge and cultivate the apiary. Gain knowledge and profit by careful practice, and diligent study of such papers and books as published by Newman, Root, Doolittle, and many others, as well as the bees themselves.

Do not start with more than you can handle well, and increase capacity with your bees. I believe the bee business is yet in its infancy, or at most in its teens.

There will be progress in the knowledge and science of bee-culture, in hives and bee-houses; in the art of increasing or decreasing swarming; in working for comb or extracted-honey; selection and mating of queens, from the quietest and best working colonies, and experimenting with importations and crosses. Colorado is making successful advance in these lines by individuals.

What we need is more concert of action, organization, the meeting and comparing of experiences. Let us encourage local clubs, and diffusion of knowledge. Tell non-producers and consumers what honey is good for, and what a cheap and wholesome medicinal food it is.

I know a lady, east of Colorado, who has been an invalid for several years, with what was called consumption of the stomach, caused by dyspepsia. Such eminent physicians as Dr. Agnew and others said she was past cure. She came to Longmont, Colo., and the first thing that her stomach seemed to relish and retain was honey. We let her have plenty of honey and light air, and some seltzer water from Springdale. In three months she could eat almost anything, and had gained about thirty pounds.

Then if it is such an elixir of life and health, let us encourage the science and production of the sweet prepared nectar for "ye gods" of earth, and proclaim to the world the exhilirating and invigorating properties of Colorado's pure air, continuous sunshine, and delicious honey.—*Read at the Colorado Convention.*

The First Bee-Escape Invented.

J. W. SILCOTT.

I send to the BEE JOURNAL Museum one of my bee-escapes and paper drawing of escape-board. It was patented in 1882, and advertised for a short time in the AMERICAN BEE JOURNAL.*

I have used it, since that time, on from 40 to 60 colonies, annually, to get the bees out of the surplus cases. This year I have used it on 60 colonies, and have taken off about 2,000 one-pound sections. With the exception of 3 colonies, I did not carry into the honey-house over a pint of bees.

The bees, in a large number of surplus cases, after they are separated from the brood and queen, soon become restless, and pass out through the escape, in a few hours, into the brood-chamber. Some will take 12, and a few will require from 24 to 36 hours for all the bees to leave the surplus cases. The surplus cases on two of the three hives before mentioned, remained on the hives for six days, and each then contained about one-half pint of bees. There was no brood, nor could I find a queen. The bees in the third did not at any time show any restlessness, and very few left the case. I searched very carefully for a queen, but failed to find one, as I had expected to. These obstinate cases occur each year in about the same proportion, but I have failed to find out the cause.

I use this bee-escape on a hive, with an outer case covering the surplus case. To use it on a hive like the dovetailed, the bee-escape board would have to be made 3 inches longer than the hive, and the surplus case placed over in front, to bring the hole, indicated in the drawing, over the brood-chamber, and the bee-escape should be covered with a small two-sided box, to make it dark.

It can also be used directly under the sections, but I prefer using it at the end or side of the case, for I think the bees leave the super sooner, and it also has the advantage of being easily examined, if anything is not working right. When I first commenced to experiment with bee-escapes, I found propolis and the pressure of the bees against the point of exit, two obstacles to be overcome; this I have done by the raised floor under the pivoted plate. Here I can let the escapes remain in place for three days before the bees commence to stick them with propolis; and the majority will be in working order if left on the hive a week. I am of the opinion that this patent covers all other bee-escapes described or advertised in the BEE JOURNAL, except the cone bee-escape.

I have written this simply to let others know that bee-escapes have been in use for years, and I think that this one is as good, if not better, than any of them. I have not made any effort to describe how these bee-escapes are made. Here the honey season ends about the middle of July, and it is a big job to remove the surplus, on account of robbing; but by the use of my bee-escape, it is a pleasure.

Snickersville, Va.

[*The advertisment was first published on page 221 of the BEE JOURNAL for April 2, 1884, and the bee-escape is as represented by Mr. Silcott. It is placed in our Museum for the inspection of visitors.—ED.]

Bees and Their Products.

D. CHALMERS.

There is quite a prevalent idea that bees convert the pollen into honey; some believe, too, that it is wax. Both principles are wrong. The bee in passing over the blossom in quest of nectar (which is unripened honey), becomes coated with pollen, and while on the wing from flower to flower brushes it from off the body with its "feathery-haired legs," in this the tongue also plays a part; it is then kneaded with its feet or claws (of which they possess six), and with the center pair placed in the basket, also used to carry propolis or bee-glue; this is gathered from the buds of certain trees for the purpose of sealing crevices in the hive.

The bee gathers the glue with its mouth, and passes it back to the basket in a similar manner that it does the pollen; in delivering the latter in the hive it merely thrusts its posterior legs into the cell and dislodges the pair of little pellets with the same claws as put it there, or else with one hind foot dumps it out of the basket on the opposite leg, but at any rate she gives it no more attention, but some of her sisters who are doing inside work, come along and pack these pellets solid; it then goes under the name of bee-bread.

It is stored immediately around the nest of brood, as it is indispensable in that particular neighborhood, forming part of the preparation for the nurture of the larvæ, and in capping the brood cells its use is essential to make the capping porous, otherwise the nymph would die. I do not dispute but that the matured bees may use it as food, but honey is their chief diet.

When a colony of bees is disturbed, they are impressed with a fear of being robbed, and under this impulse rush to the cells to fill themselves with honey. On some such occasions I have found the bee-bread very much punctured, an evidence, no doubt, that it had been gulped by the bees in their excitement.

The propolis-laden bee is unable to unload, but makes for wherever it supposes its ware is likely to be required, and those that are glueing it, being in want of more propolis, seize it from the passing bee, which continues her tramp, leaving a string between the glue remaining in the basket and the mouth of the bee that made the grab, which, by the way, is the sole cause of some comb-honey having a reddish tint.

What I have written is mostly from practical knowledge, and it is now left for the reader to compare and judge between the propriety of this and the prize essayist theory.

The bees are divided into three classes—the queen, the drones, and the workers. The latter may again be subdivided into several distinct classes, viz.: The wax-worker workers, the nurses, the honey-gatherers, the laying workers, and so on. We will endeavor to portray their several offices in the order named.

First, what is a wax-worker worker? A.—It is not a drone, but a worker-bee that gets so fat from using honey that it sweats wax in scales of about 1/16 of an inch in diameter, and as thin as common paper.

To produce one pound of this substance it is computed that the bee requires to consume about 15 pounds of honey; the wax, in scales as described, emerges through eight little pouches in the abdomen of the bee, from whence it is taken by its claws, handed to its mouth, and with its forceps worked into and becomes part of the beautiful drone or worker-comb, as the case may be; if the former, there are 16 cells to the square inch, but if the latter, there are 25 to the same measurement.

The base of the cell is trilateral, comprised of three diamonds, the center protruding about ⅛ of an inch into the sides of the bases of cells which back it, gaining its depths just where they meet, and *vice versa*. By this system of nature the capacity for brood-rearing is fully utilized, so much so that the depth of comb containing brood only measures ⅞ of an inch; therefore, in less than one cubic inch they rear at one time 50 worker bees.

Just how they form their cells of either size so accurately, I am not prepared to say. We read that with their horns they feel, hear and smell, and I think it not unlikely that they use them also in measuring off the cells when under construction; though they smell through their antennæ, yet they have breathing apertures under the wings.

We pass on now to the second detachment, the nurses. Any intelligent reader will understand that the bee, while in its larval state, requires to be fed; this only lasts for six days; but imagine the queen in the busy season laying several thousand eggs every day, which, in three days from date of deposit, require the nurse's attention. At one time there will be from 12,000 to 20,000 of larvæ in one colony, requiring nursing, and they are said to be regular gormandisers.

The first week of the worker-bee's life after maturity, is devoted to one or both of the classes above cited, since we know for a fact that they do not take to field labor until at least six or seven days old.

Let us now notice the third class, the honey gatherers. If there is any one class more momentous than the other, it is the honey gatherers. The Creator of all things made this little insect not only to gather honey for its own use, but for food and medicine for man as well, which, while collecting, it rushes over the blossoms, thrusting its proboscis into every inviting tube, and while doing so becomes more or less coated with pollen from the stamens of the flowers visited, and in doing so carries fertilization to the several flower buds, otherwise we would have no apples, no plums, no currants, nor other small fruits, neither could the farmer be assured of clover seed without this kind act of the honey-bee, which may be considered a fair deal, seed and fruit for honey.

I might just mention that the bee will never visit the flowers of more than one kind of plant on the same trip. It is hybridizing the clovers however. By what I have told you of this class of workers, you will observe that three branches of work is carried on by them at the same time, viz.: gathering honey, collecting pollen and carrying fertilization to where no other substitute can be found. The fourth class are laying workers.

Poole, Ont.

Bees and Bee-Keepers in New York.

ARIEL WELLMAN.

It seems to be a difficult task, at the present day, to write anything that will be of benefit to the average bee-keeper, especially readers of the AMERICAN BEE JOURNAL, although, if we are attentive to our business, we may see some things that every one "don't know."

I shall waste a great deal less paper, and shall try the patience of the reader less to tell a few things that I know, for it will not take half as much time to tell what I know as it would to tell what "I don't know" about bee-keeping.

At the time of taking my bees out of the cellar last Spring, I exchanged places with 2 colonies on the stands that they occupied in the Fall, and when they came out one colony went into the other hive, on the stand that they had occupied the Fall before.

I soon found them queenless, with no brood and no eggs—except in drone-comb, which was filled with eggs. I gave them eggs three times, but they dug them out and destroyed them every time. Just at that time I received a queen by mail, and having no place for the one superseded, I put her in with this colony to supersede the laying workers or drone-egg layers, and, contrary to all the advice that had been published to consign them to the brimstone pit, I concluded to try to keep them, and now they are a good colony, and are storing honey in the sections.

SKUNKS IN THE APIARY.

One night during the Summer we heard our dog (which we keep chained near the bees) barking furiously. I went out and let him loose, and he went to a hive and pulled a skunk from under the alighting-board, gave it a shake, and it was soon dead. The next morning I cut its stomach open, and found it full of bees. We had transferred the bees from a box-hive a few days before, and some of them had persisted in stayng under the alighting-board, and had built comb there, and so they aided in solving a difficult question.

Some writers claim that white clover will yield nectar the next season after a wet one. We have had three wet seasons in succession, and white and alsike clover covered the ground in some places nearly as thick as the blossoms could be, and not a bee on it during the greater part of the clover bloom.

One of my neighbors wished me to take charge of his bees during the Summer, and I went in the Spring to examine them, and found the sections that were put on the year before, still on the hives.

Some of the box-hives had the sections set flat on the top of the hives, under the caps; one frame-hive was filled from the bottom of the hive to the top of the cap—super, boxes, and all, and had been so all Winter. I do not know but it is so still, for he did not wish me to change it until they swarmed—I believe they have not swarmed yet.

Another of the knowing ones had 40 colonies last year, in box-hives, and some others that he made of dry goods boxes and odds and ends of old boards. This Spring he had 12 colonies or less.

When his bees swarmed this year, he hived them in those old box-hives, just as the bees had died in them last Winter, leaving the old combs—worms and all.

That kind of bee-keeping only occupies the bee-pasturage without doing any one any good.

South Berlin, N. Y.

Points About the Punic Bees.

HENRY ALLEY.

I wish to say a few words concerning this new race of bees, as many of those who have read the description of them in the various bee-periodicals do not believe the statements concerning their good qualities. I now have these bees working in my apiary, and will stake my reputation on the statement that the glowing accounts of them are not in the least overdrawn.

They are certainly the tamest bees I ever saw. The queens are the hardiest ever reared in the Bay State Apiary, and I have no doubt the workers are equally as hardy. So far as I have been able to test them, the claim for the hardiest bees has been substantiated. The queens on the wing are as quick as a flash. When introducing a lot the other day two escaped when shaken from the cage into the grass. They went into the air with lightning speed. It is seldom that any queen can escape from me in this way; but the Punics are too much for me. Below I give a few of the claims made for the Punic bees:

1. They do not fly into the snow like other bees.

2. They begin work before sunrise, and have the ground picked over before other kinds are on the move.

3. If the day is rather dull, or cool, they will be working in full blast, though no other kinds of bees will be flying.

4. The queens are very prolific.

5. In a fair season the smallest nucleus will build up without feeding into a grand colony for Winter. So much is this "building up" quality present in them, that a good, strong colony can be divided into 20 nuclei the end of May, and each will build in a good season without feeding, into a 10-frame colony, well stored for the Winter, and yield one or two 20-pound supers of honey from the heather.

6. They beat every other kind in their working energies.

7. They live longer than any others.

8. They fill and seal sections fuller, and cap them whiter than any other bees.

9. For extracted-honey they have no equal.

10. They can eat the hardest and dryest sugar; in fact, they will carry away the hardest and dryest sugar loaf (when no honey is to be had) put under a shed and kept as dry as possible.

11. Although they search out sweets and carry them off anywhere, they are not inclined to rob other hives—"honesty" being with them a ruling guide or principle.

12. They swarm earlier than any others.

13. They fill all cracks or chinks with an enormous quantity of propolis, and if natural supplies fail, nothing sticky comes amiss, such as bird-lime, coal tar, etc. Some may deny this as being a desirable quality, but with it they keep their combs clean, and they thus make anything do for hives—even baskets.

14. They cluster well on their combs, spread evenly over them, and shake off readily.

To sum up, we have a bee, docile, hard-working, prolific, non-robbing, and best for comb-honey. They have many other good points, that are more in favor of the queen-breeder, horticulturist, etc., than the honey-producer; this being the party to appreciate the bee that does not sting, and will build up from 1 to 20, and possibly yield 1,000 pounds of surplus honey.

I have seen enough of these bees to satisfy me that every claim for them will be fulfilled to the letter. I shall winter 30 colonies of the Punic bees, and thus give their wintering qualities a good test.

Our friend Young, of Nebraska, says he will let some one else test them before he tries them. Well, that is all right; but supposing all kinds of business should be done in that way. Where would enterprise and progress come in? Friend Young will not have to wait more than one year to ascertain the experience of other people with Punic queens.

The best way to find out the qualities of a race of bees, the best bee-hive, or anything connected with the apiary, is to test them. Do not wait for other people's opinions.

Wenham, Mass.

Description of a New Bee-Escape.

J. W. WILCOX.

Since a great many bee-keepers are trying bee-escapes, and succeeding more or less, permit me to relate what success I have had in the matter. After two seasons of experimenting with bee-escapes, I tried the following about two weeks ago, and found what I was seeking; namely, a "perfect escape"—one that will free a super, or supers, of bees in a very short time:

Make a rim the size of the super, and 1½ inches high; nail on a bottom of ½-inch lumber; in one end of the rim, cut an opening 3 inches long and ⅜ wide, for bees to pass out, place this under your supers bottom down on the hive, with the escape-hole in the rim over the bee-entrance to the hive. Make a triangle of ½ inch strips large enough to reach from the escape-hole to the hive entrance; but do not join the apex of the triangle by one inch, but leave it for the bees to pass through, and into the hive. Over the triangle tack wire-cloth, and then fasten to the front of the hive, so as to cover the escape-hole in the rim, the opening in the triangle to connect with the hive-entrance.

When this is adjusted properly, it is a pleasure to see the bees come humming down the front of the hive from the escape-hole in the rim to entrance of the hive. With this escape I have had no failure to entirely free the super of bees in an incredibly short time; and to adjust it requires very little more time than to put on a super. This triangle, covered with wire-cloth, will prevent robber bees from entering supers, and at the same time conduct the bees to the hive entrance below.

Scales Mound, Ills., Aug. 26, 1891.

Did it Ever Occur to You?

E. L. PRATT.

That the Punic bees are truly wonderful, and are a constant surprise party, with their peculiar habits?

That if we all waited until a neighbor tried a thing, it would be uphill work to get anything new introduced, even if it had merit?

That enameled cloth and the like are nuisances about a hive?

That a flat board is better, and if the covers are as they should be (flat boards) nothing more is needed?

That if you wish to cure a colony of the palsy, turn salted syrup in the combs, and thus force the bees to take it up?

That the leading queen breeders will guarantee safe introduction of all queens another season?

That if you do not follow their directions, they will not be responsible in case of loss?

That the eastern bee-keepers have taken off a good crop of honey, and are selling it cheap?

That it is a waste of bees and money to have queens fertilized in large frame hives, even if they do hold but three combs?

That the size of the colony does not effect the quality of the queen that flies from it to be mated?

That it is as easy to introduce a virgin queen as a fertile one?

That to be successful in either, the bees should be deprived of their queen for 72 hours before introducing operations are commenced?

That tobacco smoke is a great aid in handling bees in bulk?

That it should never be used in examing colonies to ascertain their condition?

That transferred combs are better melted than saved for use in movable-frame hives?

That if all did this there would be

more wax on the market, and foundation would be cheaper?

That to condemn a bee simply because it is black is a grave error?

That the Punic bees are black, and they possess points never dreamed of in the "coming bee?"

That the best bee brush is made by cutting seven-eighths of the straws from a common 10-cent corn broom?

That it is folly to wire brood-frames at all?

That Prof. Cook has done much for the queen-breeders of the United States by getting queen bees admitted to the mails?

That the last combined efforts of the above named gentleman, and the editor of the AMERICAN BEE JOURNAL, in knocking off that senseless duty on queens from abroad, deserve our highest praise?

That if we could mail queens to England, the Indies, and other points in the Postal Union, our facilities would be complete?

That the new dovetailed winter case is too shallow?

That if it could be made three inches deeper, bees would winter better?

That if the cushion comes so near the cover the moisture will condense thereon, and thus ruin its only function—ridding the cluster of the steam?

That unless the cushion is dry all the time, the bees will winter poorly?

That *Gleanings*' new cover is very artistic, and shows the touch of a master-hand?

That Mr. Frank Benton holds a Government position under the Department of Agriculture at Washington, D. C.?

Beverly, Mass.

Bees and Honey at the County Fair.

MR. EDITOR:—Many readers of the BEE JOURNAL will recollect an essay written by yourself and read at the last December meeting of the Northern Illinois Bee-Keepers' Association, entitled, "Bee and Honey Exhibits at Fairs."

Perhaps they will also remember an article, published later, stating what the above association had asked of the Winnebago County Agricultural Society, and also what the society had offered in premiums on bee and honey exhibits. Our fair occurred last week, and I will state the result:

Mr. F. Kennedy took the blue ribbon ($5.00) on display of comb-honey; S. H. Herrick taking the red ribbon.

Mr. Oliver Taylor took the blue ribbon (first premium) on display of extracted-honey; the red on sample of comb-honey; the blue on queen, drones, and workers in cage; beeswax, and bees in glass hive: also a special premium on honey vinegar.

Mrs. Chas. Winn took first premium on sample of comb-honey, and second on queen, drones, and workers in cage.

The cages of queens and the observation hive constantly drew admiring crowds. Those bees had little time to rest, as they had to be up and dressed all day long. The poor drones could not stand the racket, and were all dead by Thursday night.

Mrs. Taylor took a special premium—a silver cup—on honey pastry.

S. H. Herrick and Oliver Taylor competed for the prizes for "manipulation of bees," showing how to handle the frames, etc.

This was done on the speaker's stand, and before large audiences, on three different days, a short lecture on bees and honey being given by Mr. Herrick before each manipulation.

On Friday Mr. Herrick invited questions from the audience, promising to answer them to the best of his ability. Many questions were asked, showing that the audience were much interested in the subject.

Indeed, the whole exhibit of bees was a marked success. Now, friends, I will only add, "Go thou and do likewise."

BEE-KEEPER.

Rockford, Ills., Sept. 9, 1891.

Convention Notices.

☞The Capital Bee-Keepers' Association will meet in the Supervisors' Room of the Court House, at Springfield, Ills., on Oct. 10, 1891, at 10 a.m.

C. E. YOCOM, Sec., Sherman, Ills.

☞The Southwestern Wisconsin Bee-Keepers' Association will hold its next meeting on Wednesday and Thursday, Oct. 14 and 15, 1891, at Fennimore, Grant Co., Wis.

BENJ. E. RICE, Sec., Boscobel, Wis.

☞The 5th semi-annual convention of the Missouri State Bee-Keepers' Association will be held at Sedalia, Mo., on Wednesday and Thursday, Oct. 7 and 8, 1891. Rates for those attending are promised at the Sicher and Kaiser Hotels at $1.50 per day each. All persons so desiring are requested to make apiarian exhibits. A cordial invitation to attend the convention is extended to everybody.

J. W. ROUSE, Sec., Mexico, Mo.

Clubs of 5 New Subscriptions for $4.00 to any addresses. Ten for $7.50.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Oct. 7, 8.—Missouri State, at Sedalia, Mo.
J. W. Rouse, Sec., Mexico, Mo.

Oct. 10.—Capital, at Springfield, Ills.
C. E. Yocom, Sec., Sherman, Ills.

Oct. 14, 15.—S. W. Wisconsin, at Fennimore, Wis.
Benj. E. Rice, Sec., Boscobel, Wis.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

North American Bee-Keepers' Association

President—P. H. Elwood....Starkville, N. Y.
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y and Manager—T. G. Newman, Chicago.

Bee and Honey Gossip.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Honey of Fair Quality.

Bees in this locality did not gather much honey this season, as the weather has been too dry all Summer. My 48 colonies, Spring count, cast 6 swarms, and stored about 500 pounds of comb, and about the same amount of extracted-honey, all of fair quality.

D. Weissenberg.
Stephensville, Wis., Sept. 9, 1891.

Moving Bees.

I left Davenport, Iowa, on July 20, with 51 colonies of bees, and my entire manufacturing outfit. I came on the river as far as Johnsonville, Tenn., and transferred to the railroad. I was on the road five days and four nights. I lost 17 colonies of bees, and 200 or more combs were broken down. I can speak as to the honey resources of this country only as I am told, but will write after I have tried it awhile myself. I see lots of white clover here, but it is out of bloom for this year. I put a 5-inch cap on top of the brood-frames, but the bees suffered from the heat anyhow. Some of the hives were closed 14 days, and the bees came out all right.

Nashville, Tenn. C. K. Reading.

Only a Fair Crop.

The honey harvest, in this locality, is over for this year, and the yield has been fair. Spring count gave me 37 colonies of bees, in good condition, which increased to 56 colonies, and gave me 3,500 pounds of extracted-honey, about equally divided between basswood and buckwheat. C. D. Robinson.
West Groton, N. Y., Sept. 2, 1891.

Foundation Fastening.

I have used Beeson's hot-tongued Foundation Fastener with the greatest satisfaction. It fastens the foundation neatly, securely, quickly, and always in the right place. Indeed, I could suggest no improvement unless it would be to add a little to the size of the table to hold the pieces of foundation. As a foundation fastener, it is simply perfect.
Loveland, Colo. J. A. Ferguson.

White-Headed Drones.

I mail you to-day two white-headed drone bees, in a Benton cage. If they are something new, I would like if you could tell me what you think of them, in the American Bee Journal. There are four in the hive. Their mother was a young Italian queen that proved to be only a drone layer. If you think they could be reproduced, I will give all I have of them to any person that can give it a fair test.

Henry Patterson.
Humboldt, Nebr., Aug. 17, 1891.

[Prof. Cook's article on abnormal bees, published in this issue, will answer the above, as well as prove interesting to our readers generally.—Ed.]

Illinois State Association.

Since I last wrote you, I have received initiation fees for five new members to our Illinois State Bee-Keepers' Association. Four of them were members of A. N. Draper's family (our treasurer), of Upper Alton, and all females. The first female members of our association, also the oldest and youngest members, were Mrs. Rachel Draper (A. N. Draper's mother), aged 77 years; his wife, Mrs. Amelia C.; his daughters, Rachel C. and Clara M. The latter was born Aug. 3, 1891. The other new member is D. A. Cadwallader, of Prairie du Rocher, Ills. He writes me that he was induced to join by A. N. Draper's article in the BEE JOURNAL, relating to the honey exhibit at the Columbian Fair. At this rate of increase we will soon have quite a membership. I must have made a mistake in dates. The date of our meeting at the fair was on Tuesday, Aug. 8, instead of the 9th.

JAS. A. STONE, *Sec.*
Bradfordton, Ills., Aug. 29, 1891.

Progressive Ideas.

Mr. C. J. Robinson has searched the back numbers of the different bee-periodicals for the purpose of picking up little contradictory points of no special value, and flinging them at me in a spiteful way. I could, perhaps, find in the old volumes of the bee-periodicals; many statements that conflict with my present way of thinking. Does Mr. Robinson always hold the same ideas?

Beverly, Mass. E. L. PRATT.

Punic Bees.

In the BEE JOURNAL for Aug. 6, page 168, you acknowledge receiving samples of Punic bees from E. L. Pratt, Beverly, Mass., which has the *look*, and may lead people to think he is importing *direct* from Africa, and as the difficulties of doing so are so great, most people are likely to judge him falsely; so allow me to explain that I have sent him imported Punic queens, which were repacked with fresh worker-bees here, and sent to him; so that he has true imported Punic breeding stock. Friend Pratt wrote to me to send him queens as soon as he saw how I praised them, and was most impatiently awaiting their arrival. Americans can thus get pure blood Punic queens from him, if they wish.

A HALLAMSHIRE BEE-KEEPER.
Sheffield, Eng.

Treating Foul-Brood.

Bees in this locality came through the Winter in fine condition, and we had excellent prospects for a good honey yield. White clover never looked more promising, but about the time it began to yield nectar, the honey-dew appeared, and the consequence was that we had a big lot of poor honey. Bees have commenced to work on the aster. It generally yields enough honey to help them through the Winter, but no surplus. I have kept bees for over 20 years, and never had a case of foul-brood among them until last year, but they have got it now, and got it bad, too, and I cannot tell where it came from. I am treating them on the starvation plan, selecting the colony that was in the worst condition to commence on, and it is now rearing young, healthy bees, with no sign of foul-brood about them. I fully realize that I have a bad job on my hands, but it is kill or cure, and when I get through with it, or it gets through with me, I will make a report.

J. G. CREIGHTON.
Preston, O., Sept. 7, 1891.

Bombus.

Please tell me, through the AMERICAN BEE JOURNAL, what kind of bee this is. I found it in an old hive, from which I was transferring bees to a new hive. The bee was dead on the bottom-board. I am a novice at bee-keeping. Bees are not doing well in this locality on account of dry weather. ALF. VOLK.
Gillett, Wis., Aug. 13, 1891.

[The large, black, hairless bee from Mr. Volk, of Gillett, Wis., is a specimen of bumble-bee—bombus—which got into the hive and could not get out. The bees probably killed it, and then tried to drag its great carcass out, which they could not do, but in the effort pulled out all the hair. If the bee had not been removed, they would very likely have covered it with propolis. I presume the bumble-bee got in while the hive was opened, on some previous day.—A. J. COOK.]

Fine White Comb-Honey.

Our county fair is now in progress, and Mrs. Reeves entered comb and extracted-honey, and beeswax. She took first premium on comb-honey, first and second premiums on extracted-honey, and first and second premiums on beeswax. My comb-honey, this year, is the finest I ever saw, being so white that it is almost transparent. My bees in small hives stored about four times as much as those in the simplicity hive, consequently I am forced to believe the 8-frame hive the best, and the surplus chamber is much more preferable, as it is so easy to remove the sections. The Fall honey-flow has not yet begun here.

IRA REEVES.
Carmi, Ills., Sept. 4, 1891.

Wavelets of News.

An Umbrella in the Apiary.

An umbrella, to catch up and carry around with me whenever my hands are at liberty, is one of my greatest comforts. On extremely hot days we always have them handy, and I often make use of them, in swarming time, to hive bees. Our queens all have wings clipped, but the swarms will sometimes cluster, and although I know they will return in time, I do not wait long, but take a few from the cluster, and start them in.

As our trees are mostly small, they can usually be reached from the ground or with a step-ladder. I often turn my umbrella upside down and shake part of the cluster in it, and take them to the hive where the queen is.—*Gleanings.*

Idleness Demoralizing.

Recently I had a great inclination to work among the bees ; I had not been stung for so long that I was lonesome for their company. So I lighted a bellows smoker, put on my hat and gloves, and went into their shady retreat under the big ash.

I carefully uncovered a hive, and puffed in a little smoke to intimidate the bees, but it did not intimidate them in the least. In lieu of them thinking their house was on fire, and that they must save all they could of its contents, they flew out in a swarm and assailed me. I could hear them cracking against my hat, and uttering vengeance against the disturber of their home. I covered them up as quickly as possible and beat a retreat, shooting smoke in all directions with a vim. They followed, not caring for my ammunition, and I sought shelter among the leafy branches of a tree.

What had changed my docile Italians into such fiends? Idleness.—MRS. L. HARRISON, in the *Prairie Farmer.*

The Honey Crop.

Latest news from a large part of the country does not give a very flattering prospect of a large crop of white honey. The weather was so cold in many places during the basswood blossoming season the bees scarcely left their hives on many days, and clover had yielded poorly.

What was still worse, honey-dew, of the blackest kind, was so mixed with the white honey in the sections as to nearly or quite ruin it for table use. In some sections of country fair crops of surplus are reported, and I would advise those who succeeded in obtaining good white comb-honey to be cautious about rushing it to market and selling at a low price.

There are bee-keepers who generally try to beat the other fellow by getting their honey to market before any one else. This might get them a fair price, if it was not for the fact that nearly all bee-keepers are smart people, act in the same way, and this brings all the honey into the city markets early in the season, glutting the markets before the popular demand for honey has come, and starting the product at a low price, from which it never recovers. We never rush our honey to market very early, and shall not do so this year. The crop at the Forestville apiary promises to be reasonably good.—B. TAYLOR, in *Farm, Stock and Home.*

Feeding Uncapped Honey.

It sometimes occurs during Autumn that we have quite a lot of combs of uncapped honey, and also some sections left. It is very desirable to feed such honey to the bees, as it cannot conveniently be kept over until next year.

It will be found a pretty hard matter to get the bees to remove this honey from the combs, for if you put it in the hive, or in the upper story, they allow it to remain as it is. We have tried different plans to get them to take this honey, but it seems that it cannot be successfully done, unless the combs are exposed to the whole apiary. This plan, however, brings on robbing, and greater difficulties than before are met with.

When frames are well filled with this honey, we exchange them for lighter ones, which may be found in nearly every hive ; and to clean up the job, we extract all honey, both frames of comb and sections. For extracting sections, we use a wire box to hold about eight at one time. It is a difficult matter to keep sections partially filled with honey over until another season, and this arrangement for extracting them is very convenient. Sections kept over, partially filled with honey, should not be placed on the hive in this condition, for such will not produce nice honey in the comb.—D., in *National Stockman.*

☞ The sewing machine I got of you still gives excellent satisfaction—W. J PATTERSON, Sullivan, Ills.

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BEE JOURNAL

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ALFRED H. NEWMAN,
BUSINESS MANAGER.

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☞ Subscribers who do not receive their papers promptly, should notify us at once.

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☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

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We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

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American Bee-Keeper	1 50	1 40
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American Garden	2 50	2 00
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Nebraska Bee-Keeper	1 50	1 35

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

◆

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

◆

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

◆

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

THE AMERICAN BEE JOURNAL
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THOMAS G. NEWMAN,
EDITOR.

Vol. XXVIII. Sept. 24, 1891. No. 13.

Editorial Buzzings.

All Golden in the autumn sun,
  The waving corn-fields shine;
Purple and full of ruddy juice
  The grapes hang on the vine.

A blessing hovers in the air,
  As Earth, from toil released,
Holds, with a hush upon her face,
  Her sweet Communion feast.
—Lippincott's.

◆

George E. Hilton, of Fremont, Mich., is down again with *la grippe*. His wife writes us that "for the past week he has had the most severe attack of *la grippe* he has yet experienced." His many friends will be sorry to hear of this. We offer our sympathy, and hope for a full and speedy recovery.

◆

Turkey was the first foreign nation to hoist a flag over the grounds of the World's Columbian Exhibition, in this city. The ceremonies were conducted on Saturday last, in the Turkish language, and according to the peculiar rites of the Mohammedan religion.

Mr. R. F. Holtermann was to attend the Canadian exhibitions at Toronto, Ottawa and London, and would have reported them for the Bee Journal. After sending us a report of the Toronto Industrial Exhibition (which will appear in our next issue), he was called from that place by telegraph to the bedside of his father, in Montreal, whose right side had been paralyzed, and who will in all probability be permanently crippled. Our sympathy is extended to brother Holtermann in his trouble.

◆

The Northwestern Convention will be held in Chicago on Nov. 19. Let every bee-keeper in the Northwest make arrangements to visit the metropolis on that date, and attend the bee-keepers' love-feast. It will be held at the Commercial Hotel. See official notice on page 408.

◆

The Canton bee-lawsuit is one of the things of the past. The Union is triumphant, and brother Cole's bees are free to visit the flowers and gather the honey in and around Canton, Ills. We had hoped to have the opportunity to carry this case to the Supreme Court, but was not allowed to do so. It was clean-cut maliciousness, and would have been a grand chance to have the decision of the Supreme Court of Illinois on the simple question, "Is bee-keeping a nuisance?" Mr. Cole writes as follows to the Manager of the Union, about the settlement of the case:

> I have to acknowledge, with thanks, your favor with check for $30, to pay one-half of the attorney's fees for defending me in the several suits against me for keeping bees.
>
> The assistance and backing of the Union has saved me the humiliation of paying the fine and cost of first suit, and moving my bees at a time when it was very difficult to move them; for I would not have had the courage to have attempted to carry the case to a higher court alone. Thanking you and my fellow members of the Union for the assistance I have received.
>
> I remain yours truly,
> G. W. Cole.

Meanness.—The editor of the *News* of Miami, Mo., is trying to incite a crusade against the bees in that town. As stated on page 563 of the BEE JOURNAL for last year, one of our bee-keeping ladies has an apiary in that city, and the Mayor, who also edits a small local paper there, is endeavoring to array the neighbors of Mrs. J. M. Null against her bees. As a sample of his meanness, here is an item from his paper of last week :

> The little busy bees are mighty busy making honey these days, and the way they destroy grapes is shameful. For our part we vote them an infernal nuisance, that ought to be abated.

No gentleman would have penned such an item. No one having ordinary intelligence, such as an editor should possess, would have charged the bees with destroying the grapes. They do no such thing. Bees do not puncture the skin of a grape, and only take the oozing juice when it is going to waste, and that to their own detriment !

The only "shameful" thing about it, is the false charges of that editor ! If he, as Mayor, wants to "abate" any "nuisances," he should pounce upon that dirty sheet, the *News*, and abate it !

Just think of the want of gallantry in a man armed with the powers of a Mayor, and possessing the lever of a printing press, going around among neighbors, and endeavoring by false charges and untruthful assertions, to array them against an innoffensive lady, who happened to keep a few bees for the love of the pursuit, and the production of a few pounds of honey ! It is surprising that such a case could be found in this enlightened age, and in the country noted, the world over, for its gallantry and consideration for the ladies, and for maintaining their rights and privileges.

Mrs. Null has been a member of the National Bee-Keepers' Union for years, and her rights and privileges under the Constitution of the United States will be asserted and defended.

The injury charged to the bees is the result of over-ripeness or decay. Birds and wasps also are pilferers, but bees never puncture the sound skin of grapes.

◆

A Correspondent sends us the following item, clipped from the Kenton, (O.) *Herald*, and asks : "Who is Sir John Lubbock ?"

> Sir John Lubbock kept a queen-bee for 15 years, a test proving her eggs to be just as fertile at that age as they were 12 years before.

Sir John Lubbock is a prominent English scientist, and any opinion he may express is worthy of consideration. The foregoing item may not express his views. There may be a typographical error in the number of years, or the framing of the item by some reporter may have been unfortunate. Some years ago Sir John Lubbock stated that queen *ants*, in his nests, had been vigorous layers for 13 years. Perhaps the reporter got this statement mixed with queen bees. Usually, queen bees, after 3 or 4 years, either cease to lay, or lay only drone eggs.

◆

Water Swallows are now recorded as bee-enemies. Mrs. L. Harrison gives this incident in last week's *Prairie Farmer :*

> An amateur bee-keeper who is fond of fishing, called the other day and said while crossing the Illinois river in a skiff, he saw many dead bees floating on the water, and that he lifted out a live one on his paddle ; and he thought that the water swallows, which are very numerous, caught the bees and also knocked them into the water in their rapid flight.

◆

A Warm Wave traveled across the continent last week. The temperature ranged around the nineties, and was very oppressive. The temperature in the States of Dakota, Minnesota, Wisconsin, Michigan, and Northern Illinois and Northwestern Iowa, was the highest for this season of the year, that the weather buaeau has any record of.

The Detroit Exposition contained as usual a nice exhibit of bees and honey. With such excellent exhibitors as friends Hunt, Hutchinson and Van Deusen, and the young ladies, Anna Cutting and May Hutchinson, the display must be first-class. The following from the Michigan *Farmer*, will give an idea of the excellence of the exhibit:

Although Mr. H. D. Cutting, superintendent of the apiarian exhibit at the Exposition, was not present, the bee men and women of the State arranged a display which did credit to themselves and their industry. There were five exhibitors, but they had everything connected with the business right handy, and arranged in good taste.

The exhibitors were M. H. Hunt, of Bell Branch; W. Z. Hutchinson, of Flint, the popular editor of the *Bee-Keepers' Review*; J. Van Deusen & Son, of Sprout Brook, N. Y.; Miss Anna Cutting, of Clinton, and Miss May Hutchinson, of Flint.

Mr. Hunt's exhibit was by far the largest and most comprehensive, and was beautifully arranged, being set off by a moulding of wax which made a frame work for the piles of honey in sections, and the jars filled with luscious extracted sweetness.

An interesting study was afforded by the single comb nuclei in cases, including samples of Italian, Cyprian, Carniolan, Syrian, black and Albino bees, also the new Punic, and the real old-fashioned, unaristocratic but independent bumble-bee. Mr. Hunt claims the only Punic bees in this State, and the queen bee cost him the tidy little sum of $80.

All manner of implements for use in the apiary were shown; but their use was a mystery to the uninitiated.

The honey was most attractively put up for convenience of possible customers, and those who failed to supply themselves with the most delicious sweet in the world, missed a grand opportunity for feasting upon genuine nectar.

The other displays were excellent, if not as large as Mr. Hunt's; the Van Deusens confining themselves to comb-honey.

Misses Cutting and Hutchinson have demonstrated that women can become successful bee-keepers. Miss Cutting can maintain her usual calm serenity of eye and mien with a million bees buzzing about her, in spite of the well-known disposition to resent a momentary annoyance by the thrust of a poisoned dagger, and to present the argument later.

* * *

Bee Items from Colorado.—The following are interesting items from *Field and Farm*, published at Denver:

W. A. Dakan has made a success in bee-culture in Bergen Park, El Paso County, Colo., high up in the great mountains. He has over 30 colonies, which have done well. The honey is of unusually fine flavor, the bees pasturing entirely on the wild flora of the mountains.

The brood-combs in reserve that have the most pollen in them, should be the ones first given to the colonies in the Spring. These are the ones among which the moths work first, and make the most havoc, and the pollen they contain is just what the bees need when new pollen is not plenty, or they are prevented from collecting it by long continued storms.

To extract wax from old combs, make a sack of cheese cloth, fill it with the wax, and set the lower end in boiling water. As fast as the combs melt down, put in more until the boiler will hold no more; then tie up and place a weight on it, to sink it. The wax will rise to the top. Have a tub of cold water handy, and skim the wax off the water, and pour it in the tub. It will be perfectly pure and clean, and can be molded immediately.

A writer at La Plata, New Mexico, says that the fire-weed in that vicinity is ahead of alfalfa as a honey yielder. The specimen he sends, however, is not the regular fire-weed—*Epilobium angustifolium*—although it is related to that variety of honey-plant. It is known in science as the *Goura coccinea*, and belongs to the evening primrose family. It yields nectar generously.

* * *

Rome, the Eternal City, which, in these progressive times, is rapidily outgrowing the picturesqueness that formerly endeared it to travelers, is sympathetically described and admirably illustrated, in its modern aspects, in an article entitled, "Roma—Amor," by Henry Tyrrell, opening the October number of *Frank Leslie's Popular Monthly*.

The Illinois State Bee-Keepers' Association held sessions, as previously announced, on the grounds at the Fair, at Springfield. On account of a previous engagement, we were more than a thousand miles away, and had to deny ourself the pleasure of meeting our friends, and taking part in the deliberations. It is a matter for congratulation that the association is in the hands of efficient officers who attend to the necessary business promptly, and look after the interests of the members of our great State.

The report of the Secretary comes just as we are closing the forms of this JOURNAL, and we give it a place here:

At my earliest opportunity I desire to inform the readers of the BEE JOURNAL of our meeting at the Fair; and also of our fine display of honey (both comb and extracted); also, candied honey, beeswax, bees in observatory hives, queen bees, hives, complete for comb or extracted-honey, bee-escapes, comb-foundation, etc.

Among the displays at the Sangamon Fair was that of Hon. J. M. Hambaugh, of Spring. He had, in a large show case, a miniature apiary in one part of the case, and in the other end a very fine collection of squashes (small ones), pears, plums, eggs, etc., all made of beeswax of different shades, and arranged on glass plates of one color, on paper of another, with very fine effect.

Mr. Hambaugh had in his display a very nice showing of extracted-honey.

Mr. T. S. Wallace, of Clayton, made a fine showing of Italian bees in observatory hives, and also a large display of very fine queens.

There were many lots of fine comb and extracted-honey, but the other exhibits were made by residents of the county, and much credit is due to them for the interest they took in making so good a show of honey in such a poor year.

As there was some misunderstanding in regard to the time of holding our meeting, it was thought best to hold it on both days, which was done.

The Illinois Bee-Keepers' Association was called to order on Tuesday, Sept. 8, at 1 p.m., by the President, P. J. England, at the Sangamon Fair Grounds at Springfield, for the purpose (as before stated in notice given) of taking steps toward the formation of a programme for the next regular meeting in December.

The roll was called, and a quorum declared to be present. A motion was made by Col. Chas. F. Mills, that a committee of three be appointed by the chair to formulate a programme for the coming meeting. The motion prevailed.

The chair appointed as that committee: Jas. A. Stone, of Bradfordton; Thomas G. Newman, of Chicago; and C. P. Dadant, of Hamilton, Ills.

A motion was made (which prevailed) that Col. Chas. F. Mills be appointed a committee of one, to draft resolutions expressing the gratitude of the Illinois State Bee-Keepers' Association to the Hon. J. M. Hambaugh, and others, who worked so faithfully with him in behalf of this association in the last Legislature.

Three new members were enrolled by the Secretary, and a list of 25 more were handed in by A. N. Draper, of Upper Alton. Can any other member hand in such a list as that? One dollar fees were paid by each.

Many discussions were had in regard to the subjects that should be embodied in our next programme.

The meeting adjourned until Wednesday, the 9th inst., when the same subject was discussed through the meeting until it adjourned *sine die*.

JAS. A. STONE, *Sec.*

Are You Going to the Illinois State Fair? If so, it will be pleasant to meet other apiarists there. It will be held at Peoria from Sept. 28 to Oct. 3. That is the home of Mrs. L. Harrison, and she writes us as follows concerning where she may be found:

I will be very glad to meet bee-keepers and other friends around the honey exhibit; when not there, I may be found at the American Cottage, just south of James Selby & Co.'s, Machinery Hall.

MRS. L. HARRISON.

Peoria, Ills., Sept. 14, 1891.

An Amateur bee-keeper of Maine, while working in the apiary, by accident upset a hive of bees. Being protected by a veil and loose overalls, he was amused at the frantic attempts of the bees to sting, until he stooped to pick up something, when his loose overalls did not protect him from the angry bees, and then it was not quite so amusing.

Bug-Juice.—The following question has been sent us by a correspondent with a request that we answer it:

> Will you please answer through the BEE JOURNAL, why it is that our prominent bee-keepers, including the editor (page 329), persist in using the inelegant expression of bug-juice instead of honey-dew? See Webster on honey-dew.
> Ottumwa, Iowa. C. LAWRENCE.

The sweet saccharine substance exuding from plants and trees, found on the leaves in small drops, resembling dew, was pardonably called honey-dew, because of its form and sweetness. To distinguish this from the secretions of the aphides, Prof. Cook named the latter bug-juice. The use of this term has been quite general of late, because of its appropriateness, without thinking of its inelegance.

We are well aware that Webster says that two "substances have been called" honey-dew; "one exuding from the plants, and the other secreted by certain insects, especially the aphides." But when it became necessary to distinguish between these two substances, another term was essential for one of the two. We now, therefore, call that which exudes from the plants (a natural plant nectar) honey-dew; while the secretion of insects is named (inelegantly, we grant) bug-juice. The name indicates, in some slight degree, the abhorrence we feel for the latter product. It is not "honey," neither is it "dew," and in no way is it *entitled* to the appellation of "honey-dew." It is the *nasty* exudation of plant lice, as Webster calls the aphides. To sell it for honey should be more strongly condemned than to sell glucose for it, because of its impurity and filthiness.

◆

Australia, New Zealand, Tasmania, New Guinea, etc., will be admitted to the Postal Union on Oct. 1, 1891. This is good news for our subscribers in Australasia. It will save them one-half of the postage they have been paying on the BEE JOURNAL, and will place them on a level with European subscribers, who have for years been paying only one cent postage for each copy, while they have been paying 2 cents.

> For New South Wales, Victoria, Queensland, New Zealand, West Australia and Tasmania the letter rates have been 12 cents per half ounce; newspapers, 2 cents per copy; other printed matter and samples of merchandise, 1 cent per ounce.
>
> The new rates will be: Letters, 5 cents per half ounce; postal cards, 2 cents each; newspapers or other printed matter, 1 cent for each two ounces, or fraction thereof; samples of merchandise not in excess of four ounces, 1 cent for each two ounces or fraction thereof.
>
> Where all mail to these points formerly had to be prepaid, payments will now be optional. Registration fees an letters or other articles will be 10 cents.
>
> The only countries now excluded from the Postal Union are Cape Colony, Natal, Orange Free State, St. Helena, Ascension, Transvaal, China, Madagascar and Morocco.

◆

A Sweet Way to cultivate the honey market is shown by the following, from an exchange:

> One good woman in New York, who is not in society, not rich, not fashionable, and not willing to have her name printed in the newspapers or charity reports, contributed 1,400,000 slices of fresh bread and honey during the school year just closed, to 1,000 little industrial scholars. Every day for the 200 days the lunch has been provided, averaging 7,000 slices, not one of which went to waste.

◆

When Writing a letter be sure to sign it. Too often we get letters with the name of the post-office, but no County or State. One such came recently, and we looked into the Postal Guide and found there were places by that name in 13 States. That order for goods will have to wait until another letter comes to give the proper address. Be sure to stamp your letter, or it may go to the dead letter office.

◆

Clubs of 5 New Subscriptions for $4.00 to any addresses. Ten for $7.50.

Queries and Replies.

Piping of Young Queens.

Query 785.—1. After a colony has cast a prime swarm, is it the first young queen that hatches out that does the piping in a high, shrill key? 2. If so, does this same queen come out with an after-swarm? 3. If no after-swarm issues, does the piping queen become the mother bee of the colony?—N. C.

Yes, to all of the above questions.—A. J. Cook.

Yes, to all three questions.—Mrs. L. Harrison.

I think so, to all three questions.—C. C. Miller.

1. I think so. 2. Yes. 3. Yes.—G. L. Tinker.

1. Yes. 2. Yes, if one is cast. 3. Yes, as a rule.—G. M. Doolittle.

Indeed, I could never find out the correct answer to either of these questions.—J. M. Hambaugh.

1. I think so. 2. Yes, if there is an after-swarm. 3. The hatched queens fight it out, and the survivor remains queen of the colony.—R. L. Taylor.

1. Yes; and sometimes others, as they hatch and are not destroyed. 2. Yes, and I have known three or four such queens with a second swarm. 3. Yes.—C. H. Dibbern.

1. Yes, as a rule. 2. Yes, as a rule, and perhaps several others with her. 3. Perhaps; and it may be that she succumbs to another, which is hatched later.—James Heddon.

The queen, in any case, pipes when she is crossed in her wishes. It is a cry of anger in either a young or an old queen. Young queens pipe when kept imprisoned in the cell before the departure of the swarm.—Dadant & Son.

1. No. It is those confined to their cells by the bees—or possibly both, as we often hear more than one. 2. The first young queen leads the after-swarm, if the bees intend to swarm. 3. Yes; only in this case there is no piping.—Eugene Secor.

1. It is the first young queen that hatches which pipes in the high key. There are few exceptions. 2. The same. 3. She does. These answers I base on long observations in the hive. But it must be borne in mind that bees do not follow invariable rules.—J. P. H. Brown.

1. Yes. 2. Usually that same one, and sundry others. 3. If there is no after-swarm, there is no piping queen. If, when the first queen hatches, the bees destroy the remaining queen-cells, or permit the young queen to do it, there is no occasion for piping.—M. Mahin.

1. Yes; the piping is made by the first queen out of cell, and is answered by those not yet emerged; hence, the difference in tone. 2. Sometimes she does, and sometimes she does not. Much depends upon the weather. Sometimes several queens come out with the swarm. 3. It is supposed she does, though it is possible she may be killed by a queen emerging from a cell later.—J. E. Pond.

1. Under ordinary circumstances—that is, if the prime swarm has not been delayed by bad weather—the first young queen will hatch out on the eighth day after the swarm issues, and it is this first hatched queen that pipes in a high key. The sound, or sounds, that come as from a-far off, is produced by young queens imprisoned by the guarding workers in their cells. The shrill piping comes from the first queen that hatches, and is at liberty on the combs. 2. Ordinarily, she is the one that goes with the first after-swarm. 3. If for any cause, the workers decline to cast an after-swarms, the first queen that hatches destroys her sister rivals, while in their cells, and becomes the mother of the colony.—G. W. Demaree.

1. Yes. 2. Generally, and she is often accompanied with several others. 3. Piping is a sign of anger. When a young queen is kept in the cell waiting for the departure of the swarm, she often becomes impatient, and piping is the result. The young queens remaining fight it out, in royal battle, and the survivor becomes the queen of the colony.—The Editor.

* * *

Bee Journal Posters, printed in two colors, will be sent free upon application. They may be used to advantage at Fairs over Bee and Honey Exhibits. Samples sent free. Write a week before the Fair where to send them.

An Autumn Flower.

I saw a miracle to-day !
Where the September sunshine lay
Languidly as a lost desire
Upon a sumac's fading fire,
Where calm some pallid asters trod,
Indifferent, past a golden-rod,
Beside a grayhaired thistle set—
A perfect purple violet.

So lonely when the Spring was gone.
So calm when Autumn splendors shone,
So peaceful midst the blazing flowers,
So blessed through the golden hours,
So might have bloomed my love for thee,
It is not, and it cannot be—
It cannot, must not be, and yet,
I picked for thee the violet.

—ELIZABETH S. P. WARD.

Topics of Interest.

Prevention of Propolis on Comb-Honey.

G. M. DOOLITTLE.

There has been sent to me to answer, through the columns of the AMERICAN BEE JOURNAL, a question regarding the prevention of propolis on comb-honey, the correspondent describing it as "being covered with propolis, which cannot be gotten off," and adding: "What I want to know is, how can I produce comb-honey without having it all covered with propolis on top, and comb on the bottom ?"

If the "being covered with propolis" means that the bees cover the cappings to the cells with propolis after the honey is sealed, I will say that this is something which I never knew to happen but once or twice in my bee-keeping experience, and then with only one or two colonies. Several years ago I had two colonies which persisted in varnishing the capping to the cells all over with propolis, about as soon as the honey was sealed, they in some instances putting on so much propolis that it would run down over the face side to the combs, making the honey unsalable. To obviate the matter as much as possible, I took the honey off just as soon as it was sealed, and after the honey season was over I changed the queens in these colonies, and had no further trouble with them in that respect.

If the above is what is meant by "all covered," then our correspondent will know how to proceed, unless it is the locality that gives such results. By changing a few queens the first year he will ascertain whether the trouble is with the queens, or with the location. If the location is to blame, then I know of no other way than to take off the honey as soon as sealed.

However, from the wording of the question, I judge that the trouble is not with the honey being covered with propolis, but that the propolis is placed on the sections, as he mentions "propolis on top" and "comb on the bottom." If the trouble is propolis on the sections, then I would advise the adopting of some kind of a super that will exclude the bees from the top and bottom of the sections, and I know of nothing better for this than the wide frames.

This propolis difficulty is one of the reasons why I stick to wide frames. I never could tolerate any kind of surplus arrangement which gave the bees access to the outside of the sections, for in this locality large quantities of propolis are gathered during the month of August, and every part of the hive accessible to the bees is coated over with it. With the wide frames there is no accumulation of propolis, except where the wide frames and sections come together at the edges, and this is easily scraped off with a blunt knife, after the sections have been off the hive for a little time. The above should help any one avoid the propolis difficulty, it seems to me.

BACILLUS ALVEI.

By reading the replies to Query 782, I see that a number of those answering the question, "What is the cause of foul-brood ?" say, *Bacillus alvei*. Dr. Tinker modifies his a little by speaking of Cheshire as the author of the name, but says it "is, without doubt, the true cause."

Well, I am not going to say that it is not, but if Cheshire is no more correct as to the name of the disease, than he is in his diagnosis of the same, then there is little dependence to be placed on what he says regarding the matter—not enough so for any one to say that foul-brood is caused by *Bacillus alvei*.

Every person in North America, who has any personal experience with foul-brood, knows that the honey from a foul-broody colony will spread the contagion far and wide, if this honey is placed where the bees have access to it. There is no guess-work about there being "death in the honey," and yet Cheshire says "the popular idea that honey is the means by which it is carried from hive to hive, and that mainly through robbing, is so far in error, that only occasionally and casually can honey convey it from colony to colony."

He also tells us that the eggs of the queens contain bacilli, from which it would appear that wherever a queen from a foul-brood colony went the disease must go; for, surely, if these are in the eggs, the larva hatched from these eggs must, of course, be fed upon by these bacilli; hence would die of the disease; yet, the fact remains, that where no foul-brood honey goes no disease goes, or the thousands of colonies cured by the Jones, or more properly, the original Quinby plan of fasting, could never have been cured. Although Jones, Root and many others have proven the fallacy of Cheshire's conclusions regarding foul-brood, yet, as far as I have seen, he has not taken back what he wrote, or even said he might have been mistaken. I wish to impress upon the minds of all that *honey from foul-broody hives must be scalded, the first thing after being taken from the hive, or from the bees*, or there is great danger that your own or your neighbors' bees will carry a little of it off, when, just as sure as effect follows cause, the colony which receives a bee load of this honey, will in due time become extinct from foul-brood, unless the apiarist is on hand to cure it by the fasting plan.

FASTENING COMBS IN FRAMES.

A correspondent wishes to know how to fasten combs in the frames when transferring. There are several ways of doing this, such as winding a good quality of wrapping twine around comb, frame and all; using narrow, thin sticks a little longer than the frame is wide, which are tied at each end so as to hold the comb in place, or using transferring clasps for the purpose, all of which must be removed in a few days. The method which I prefer is as follows:

Upon a wide board place several thicknesses of cloth, on this lay the comb, over the comb lay the frame, and mark the comb a little larger than the frame, by holding the knife leaning in a little. Now, with the right sized brad-awl, punch the required number of holes through the sides, top and bottom of the frame, when it is to be pushed over the comb, which has been cut according to the marks made, after which wire nails of the suitable size and length are pushed into the holes and comb, which will hold the comb in place, and the nails need not be removed unless you choose.

Borodino, N. Y.

Hunting the Honey-Bee.

The bee-hunter may not be entitled to a place in the front rank of sportsmen, says the New York *Times*, but he has not a little fun, often not a few pains, and in the end a good deal of satisfaction. He is also a claimant of a certain amount of veneration on account of the ancient nature of his pursuit.

The primitive man must have been a great bee-hunter, because he had no other way of getting his honey, and his brother, the bear, from whom he probably learned the pastime, is to-day a living witness of those early proclivities. Wherever there is a bear and a bee-tree, the two are bound, sooner or later, to come together, and then there is more bear, but no more bees or honey.

There is much bee hunting all over this country wherever woods abound, but among the backwoodsmen in the great pine forests of the South, it is a favorite recreation. These men are always on the lookout for bee-trees, and nothing but actual sight of the quarry in immediate quest will deter them from following a bee discovered on the wing.

In South Carolina there lives one of these men named Hoge, who is a very old man now. The writer was hunting with Hoge one day many years ago, when he suddenly, without a word of explanation, clapped spurs to his horse, and shot off through the forest at a breakneck pace. The best thing to do under the circumstances was to await his return to the spot he started from. When he came back, something more than half an hour later, he explained that he had gone off in pursuit of a bee that had loaded up with honey, and was bound for its tree.

In the Autumn the pine forests are carpeted with a thousand wild flowers of various hues, but gold and purple are the predominant shades. The flowers furnish rich pasturage for the bees, which are consequently very abundant. They build their combs in hollows of the lofty pines, seldom less than 40 or 50 feet from the ground.

When the bee has filled itself up with honey, it makes off for its tree as straight as it can go; hence the common saying, a bee-line. If you can follow it at that time, you are sure to find the tree in which the colony has its store of honey. But it is not such an easy matter to follow it through a forest, for several reasons. The chief of these are its rapid flight, and the difficulty of keeping such a small object in view in a forest where there are violent contrasts of light and shade, and where trunks and branches of trees are likely to intervene at frequent intervals. Consequently success is by no means certain, even when the conditions are favoring.

When you have found your tree the real sport of the pursuit, the robbing of the tree, is often delayed for days, and sometimes weeks. The next step is to make up a party. This usually numbers four or five, and includes at least two good axmen, for the tree—in nine cases out of ten a large one—must invariably be felled, and the labor involved is by no means slight. The party sets out with a cart laden with axes and vessels to hold the honey, usually about noon or in the early afternoon. While the axmen are cutting at the tree, other members of the party busy themselves in kindling a fire with lightwood knots, and in gathering a good supply of green grass or leaves.

As a rule there is only one hole by which the bees make their way to and from the cavity within the tree, and the first thing to do after the tree has fallen, is to stop this up. That is a wise precaution, for otherwise the bees are apt to make it difficult for the hunters to get the honey.

When, therefore, the tree is about to fall, one of the party who has had some experience in that particuar direction, takes a handful of grass, or some other loose and compressible material, and stands by to plug the hole as soon as the tree is upon the ground. When the hole has been plugged, there is a buzzing in the hollow of the tree for all the world like the indistinct roar of a distant infuriated mob.

Having successfully imprisoned the pugnacious little honey-gatherers in their own house, some of the blazing brands are brought from the fire already made, and placed against the tree beneath the hole, more fuel is put on, and when a cheery blaze has been started, it is smothered with a covering of the green stuff previously gathered to make a dense smoke.

When a good smoke has been raised, the axmen are again called into request to split the trunk open in sections, so as to give access to the honey. Before the hollow is cut into, however, the plug is generally taken out of the orifice, so as to let in the smoke, and if that is successfully done, the bees are not likeiy to be troublesome when the comb is exposed. Sometimes, though, the smoke does not go in, and when the first section of the trunk is split off, the bees come cut in a perfect cloud, and settle down on the first hunter they come in contact with.

They will swarm over his head, face, neck, shoulders, and hands, forming a complete living, crawling, and intensely irritating envelope. He must be a man of uncommon self-control to remain immovable in such circumstances for many minutes. And yet his only salvation is to keep as still as a statue, for should he squeeze one of the insects between his neck and his shirt collar, for example, he would inevitably be stung, and if one bee stings when they are swarming on you in that way, then every individual in the family is likely to sting also.

To attempt to brush them off is certain to provoke them to sting, and the consequence in such an event are really very serious. While thus swarmed upon, the writer has been compelled to remain immovable for at least a quarter of an hour in real agony of irritation from the crawling of the insects.

Two or three bushels of loaded comb are sometimes taken from one of these trees, and the honey is always of superior quality. It also has, in the Fall of the year, a peculiar flavor imparted to it by the forest flowers, which renders it much more palatable than the honey of the domestic bee.

There are a good many black bears in the larger swamps of South Carolina, and these fellows frequently roam over the pine forests in the Summer and Autumn in search of bee-trees, where patches of ripening corn are not convenient. When a bear has found a tree containing a colony of bees, he will climb without loss of time to the orifice, and proceed to gnaw it until it is enlarged sufficiently to admit one of his paws, and then his feast begins.

It must not be supposed that he is permitted to do the gnawing unmolested. The bees attack him fiercely about the head, but he goes right on with his business, pausing only occasionally to rub the insects off against the bark of the tree when they crowd on too thick, and the rest of the time seeks relief from their torture in short, savage growls or grunts, varied by an occasional squeal.

When he can get one of his paws into the orifice, he rakes out the comb in great chunks, and swallows it greedily—bees and all. As a rule, there is little left of bees or honey when he has finished the job. Occasionally hunters have found a bear in the act of robbing a bee-tree, and have taken bruin home with them.

In New Hampshire the boys and youths have a good deal of sport by baiting the bees in the woods with honey and following them up to their trees, which are then robbed in a manner similar to that described above.

Punic Bees, the Queen Trade, Etc.

E. L. PRATT.

A queen breeder stands as a target for more unjust criticism than a honey producer, or a manufacturer or dealer in bee supplies. He is obliged to answer for the inexperienced, and to shoulder the sins of an army of growling, dissatisfied persons, because of their limited knowledge of the bee business.

Here, for instance, is a man who has received his first queen in good condition, and has been successful in introducing her. He follows directions to the letter, and waits patiently until he sees the beautiful progeny of his lovely queen. He writes to the breeder and tells him of his success and pleasure.

Now, if this same man had by chance received his queen dead, had lost her in introducing, or had the queen been injured in the mails, or when being packed for shipment, or had any one of a hundred other ills befallen her, what a growler this same man would have been. In fact, his tone would be just the opposite of that in the first case.

It should be thoroughly understood what a long journey it is from an egg to a laying queen in a customer's hive some 500 or 600 miles away. When a breeder is rearing queens by the thousand and shipping in all directions, can he be blamed if a few of the queens are not up to the standard when received?

I believe that customers are entitled to full value for their money. If they send money for a queen of certain requirements, the breeder is in duty bound to furnish therewith the desired bee. It is his duty, not only to mail such a queen, but to see to it that she is safely introduced, and that she gives entire satisfaction.

On the other hand, it is the purchaser's duty to have patience, and if the queen does not happen to be first-class, to make his complaint to the breeder, and in a gentlemanly and business-like manner. If the breeder's directions are not followed, the introduction is at the customer's risk. If the queen is lost by flying away, due to careless opening of the cage, it should be the customer's loss. Most queen breeders guarantee safe arrival of queen, safe introduction, purity, and satisfaction. They expect customers to allow them to replace all queens that by accident, or from other causes prove inferior, and thus show to the customer a fair sample of their stock.

It is to the advantage of the breeder to send only fine queens to all, and thus secure customers for future orders, besides making new ones by the advertising through visitors to the customer's apiary. If this is "humbuggery," then I am indeed "in it."

THE PUNIC BEE.

The *Canadian Bee Journal* contains a communication advising its readers not to take any stock in the Punic bees. The editor's advice is to let some other fellow try them first.

The Punic bees are to stand in America entirely upon their own merits. Let us see whether they stand or fall!

Editor Newman thinks that one out of four virgins is a poor result, but he does not seem to realize that one out of four from England is equal to a very much larger percentage of safely introduced virgin queens but a few days old from points not more than 24 to 48 hours distant by mail. Eighty-five per cent is good enough, and that is about the way fresh virgins will pan out all through the warm months when there are plenty of drones flying.

I have been asked several times about the swarming of the Punics. All other races cease feeding their queen, egg laying stops entirely, and the bees do nothing for from three to ten days, according to the race and the condition of the weather. Punic queens lay eggs up to the hour the swarm issues, and the bees work just as hard during the entire excitement.

The first swarm is usually very small, and the queen, being heavy with eggs, falls to the ground when the swarm issues. If the bee-keeper is near, she can be picked up and caged, like a clipped queen. This condition of the queen causes the bees to cluster low and settle quickly.

When hived they at once go to work in earnest. The after-swarms are larger than the prime swarm, and are liable to contain several queens.

Punics never swarm without leaving queen-cells. They will not swarm from empty combs, and a spell of bad weather will very often cause them to give up the notion entirely.

With proper management, at the proper time, Punic bees will give less trouble at swarming time than Italians.

Beverly, Mass.

Native or Black Bees Defended.

A. D. ELLINGWOOD.

In defending black bees I am well aware that I have taken hold of an unpopular race of bees, but why they are thus unpopular I cannot understand. I am heartily sick of the slurs and disparaging epithets cast upon the black bees.

Put the same thought and study into the development of the blacks that has been given to the Italians, and you will have a superior race of bees.

I will concede to the lover of the Italian bee the following points of superiority in his favorite bee:

1. The Italian bees are more beautiful to look upon.
2. They can gather honey from certain flowers that the blacks do not work upon.
3. They protect their hives better.

Here are three points of superiority, and I will not admit that they are superior in any other way.

Now, I claim that the black bees have the following points of superiority over any other race:

1. They winter better.
2. They rob less.
3. They swarm less than the hybrids or Carniolans.
4. They gather more surplus honey, because they go to work quicker in the sections.
5. They build their combs more evenly, and cap the honey whiter.
6. They are more gentle to handle.

This is not guess work, nor a "think so" idea. I have kept both blacks and Italians for a number of years. I have, during this time, made some pretty rigid comparisons, and the blacks have given me the most money every time.

In 1888 six colonies of blacks gave me 500 pounds of nice comb-honey. In the same yard I had 35 colonies of Italians and hybrids, and about all they did for the Summer was to swarm and go way to the top of the highest tree in the vicinity, and rob and fight the blacks. They only gave me about 10 pounds of comb-honey.

In the Fall there was 45 or 50 colonies of the hybrids, and that Winter they nearly all died, and the cause of their death has always been a mystery to me—they just died, and I was not very sorry.

I have bought new queens again and again, hoping to get something better than I had, but they have none of them been any better than my native black bees.

The bee-keepers all through this county have had the same experience; and almost without exception they prefer the black bees.

Now, bee-keepers of America, do not slap and slander the black bees any more until you have given them as fair a trial as you have the Italians.

They are not the puny, weak, good-for-nothing scamps that you would make it appear that they are; but if you use them well, you will find them a hardy, busy and valuable race of bees.

Berlin Falls, N. H.

False Ideas About Eastern Bees.

PH. J. BALDENSPERGER.

Allow me to correct some false ideas about our eastern bees, appearing from time to time in bee-periodicals all over the world.

I am a honey producer, and not a queen breeder, and would take to any bees as soon as it would pay to keep them—even the wonderful Punic bees, which I have in my apiary, and have worked in their own Punic homes, without discovering the marvelous qualities described in the BEE JOURNAL of May 28, 1891.

On page 743, an article copied from the *Indiana Farmer* says the Palestine bees are inferior to the Syrians. "They use more propolis than any other variety, and are more troubled with laying workers." The writer of that article must have had a great deal of experience with Palestines. I have worked both Syrians and Palestines in their own homes, and have failed to detect the difference to which some breeders like to call attention.

Both are apt to have laying workers, as well as any other race, when neglected, but will survive queenlessness an astonishing length of time, if properly manipulated. Sometimes virgin queens remain nearly a month in the hive, before flying out to mate, and still laying workers do not appear. When a queen is lost, the danger of having laying workers becomes greater, but can be prevented by putting in a frame with eggs, occasionally, and sometimes hatching brood.

This year I gave an old queen, which I wished to dispose of, to a colony containing laying workers; she was accepted, and the laying workers soon disappeared. This queen was soon after removed, and queen-cells given to the colony, and by April 7 they had a young queen, which began laying on April 26, and the colony stored 80 pounds of surplus honey after all that manipulation. July 30 being the date of the last extracting, this colony will be in fine condition for Winter—plenty of stores, young queen and bees.

The Cyprian, Syrian, Palestine and Egyptian bees all sting. Do not the Albinos and "niggers?" I suppose very much depends on the climate in which they are bred, and how they are managed. For instance, Mr. Benton, some years ago, exchanged some Punic bees for Palestines, and he said: "Mrs. Benton says she would rather manipulate the 'ugly Palestines' than those 'Tunisians,' while I thought to the contrary. I find the 'Tunisians' less liable to sting than the Palestines."

But crossing and recrossing has been practiced so extensively, both in Europe and America, that I think there are none who can claim a pure race, except those possessing imported queens. If this is not so, why is fresh blood always demanded?

Jaffa, Palestine, Aug. 11, 1891.

Golden Carniolan Bees.

JOHN ANDREWS.

On page 330 of the Bee Journal, I find an article from Mr. Henry Alley, bearing the caption, "Humbuggery in the Queen Trade," and I wish to ask a question: Why do the gray Carniolans continue to breed gray if left in their native country, but so soon become yellow in the hands of queen breeders in this country?

They do not become yellow in my apiary, unless the young queens, in mating, meet with drones of a yellow race from a distance. I have queens that I have bred from for two years, whose worker progeny do not show any yellow bands yet, and if they could be placed where I could possibly examine the surroundings, I would like to put them in competition for that $100.

I would suggest, and ask his consent, that some one of the officers of the Eastern New York Bee-Keepers' Association be chosen to conduct such an experiment, and I will pay the expenses of the officer chosen, whether I win or not.

It is true, that I have had imported queens that gave to some of their worker progeny (perhaps 1 bee in 50) yellow bands, but of these queens not more than one in five reared such workers, and this is satisfactorily explained in Mr. Frank Benton's communication to the *American Bee-Keeper* for July, 1891, and no man in this country knows better than he how this peculiar marking came to the Carniolan bee.

If I were away from all other bees, I could keep them a pure gray for 25 years, provided I lived that long. I have bred these bees for eight years, and know what I can do with them. I accept Mr. Alley's challenge, under the conditions named above.

Patten's Mills, N. Y.

[If Mr. Andrews had read Mr. Alley's communication carefully, it would not have been necessary to ask the question in the first paragraph of the foregoing article. On page 330, second column, in the first paragraph from the top, will be found the following language employed by Mr. Alley:

"I found that these bees could easily be bred to a pure golden yellow, clear yellow or orange yellow. *So, selecting the light colored queens and drones*, I soon produced the golden Carniolan bees."

The above, in connection with the remainder of Mr. Alley's communication, we think, fully answers the question. The italics are our own.—Ed.]

Preparing Bees for Winter.

DR. C. C. MILLER.

Are you thinking about getting ready for Winter? I know it is early yet, but unless you begin to think about it long before you think it is time, you will find that a good many things will be put off until it is too late for them to be easily done.

Bees can be united more easily when gathering honey than when every bee is on the alert to slaughter any intruder for fear that it is a robber.

It is a very unsatisfactory thing to have a mere handful of bees in a hive for wintering, and it will be well to unite them until there are none but colonies of respectable size for wintering. If bees are gathering honey, there is little trouble about uniting without any great precaution. If you see any signs of fighting a good smoking will help matter.

Repeat, if necessary, till they promise to be good.

English bee-keepers report great success in the use of flour for uniting. Sprinkle well with flour each colony of bees to be united, and they say that by the time they get the floor cleaned off they will not know which lot they belong to.

Of course, if you live in a place where bees gather much surplus from Fall flowers, there is not the same need for haste in uniting weak colonies. It is well to see that the hives are well stocked for Winter. It is much better to do any necessary feeding early. There will be less danger from robbing, and the bees have time to get it in better shape.

Good honey is probably as good Winter food as you can get. It is a good plan to have some extra combs on hand to give to the needy. Remember that a little too much is just right. I had some bees starve last Winter that I had supposed sufficiently provisioned. Bees are very uneven about the amount they consume. One colony may consume twice as much as another of equal strength standing by its side. Bees seem to be more contented if there is no danger of famine. Besides it is quite possible that a colony is warmer if the combs are well filled. At any rate they will not waste it if they have more food than they need.—*National Stockman.*

Marengo, Ills.

Bees and Honey at Nebraska State Fair.

L. D. STILSON.

Enclosed I send you list of premiums awarded at our State Fair, at Lincoln, Nebr., Sept. 4 to 11. The exhibit in our bee and honey hall was the finest ever had in our State, and the officers of our State Bee-Keepers' Association are greatly encouraged at the increased interest taken by bee-keepers throughout the State.

On Wednesday evening, Sept. 9, the annual meeting of the association was held, which consisted in reports of officers and routine work, after which the subject of preparation for wintering was freely discussed. On Thursday evening occurred the election of officers for the ensuing year:

E. Whitcomb, of Friend, was elected President; Mrs. J. N. Heater, of Columbus, Vice-President; L. D. Stilson, of York, Secretary; and J. N. Heater, of Columbus, Treasurer.

Plans were discussed for bringing our apiarian products into market in the best condition, and also how to show our products to the best advantage.

In making arrangements for the State Fair next year, it was thought best to ask to have competitive premiums for county collective exhibits of bees, honey and fixtures, in addition to the present system of separate entries.

PREMIUMS AWARDED.

Best 25 pounds of comb-honey, basswood or white clover—first premium, August E. Davidson, Omaha, $8.00; second, A. G. Porter, Lincoln, $4.00.

Twenty-five pounds of Fall comb-honey—first premium, Mrs. J. N. Heater, Columbus, $8.00; second, Amos Greenmyer, Cheeney, $4.00.

Gallon extracted white clover or basswood honey—August E. Davidson, Omaha, $8.00.

Gallon extracted Fall honey—first premium, E. Whitcomb, Friend, $4.00; second, Mrs. J. N. Heater, Columbus, $2.40.

The above was limited to competitors producing their own honey in Nebraska during the year 1891.

Best 20 pounds of granulated honey—first premium, A. E. Davidson, $4.00; second, Mrs. J. N. Heater, $2.40.

Largest display of any one including bees, extracted and comb-honey, and apiarian supplies—first premium, E. Kretchmer, Red Oak, Iowa, $12.00; second, Mrs. J. N. Heater, Columbus, Nebr., $8.00.

Exhibit of brood-chamber and surplus comb-foundation, full to partly-drawn out—first premium, E. Kretchmer, $8.00; second, Mrs. J. N. Heater, $4.

Exhibit of apiarian supplies and implements—first premium, E. Kretchmer, $12.00; second, Levering Bros., Wyota, Iowa, $8.00.

Display of honey in marketable shape—first premium—Mrs. Heater, $8.00; second, August E. Davidson, $4.00.

Display of honey candy, honey sugar, and sweets, by any one, in which honey is made to fill the place of sugar—first premium, E. Kretchmer, $4.00; second, Thos. Dobson, Germantown, $2.40.

Honey vinegar—first premium, E. Kretchmer, $2.40; second, Hanna Whitcomb, $1.60.

Best display of bees and queens in observatory hives—first premium, Chas. White, Farmers' Valley, $8.00; second, E. Kretchmer, $4.00.

Exhibition of extracting honey on the grounds—first premium, E. Kretchmer, $8.00; second, Mrs. Heater, $4.00.

Honey extractor—first premium, E. Kretchmer, $4.00; second, Mrs. Heater, $2.40.

All-purpose single-walled hive—first premium, E. Kretchmer, $1.60; second, Mrs. Heater, 80 cents.

All-purpose chaff hive—first premium, Levering Bros., $1.60; second, E. Kretchmer, 80 cents.

Bee-smoker—first premium, W. Polsey, Wahoo, 80 cents; second, E. Kretchmer, 40 cents.

The following was confined to exhibitors in Nebraska:

Best display of apiarian implements and supplies, including comb-foundation, cells full to partially-drawn out, and queens and bees in cages—first premium, W. E. Davidson, $8.00; second, Mrs. Heater, $4.00.

Report of surplus honey stored by any colony of bees during the year 1891, the amount of stores, manner of building up, handling, kind of hive used, and kind and quality stored—premium, J. F. Langley, Gevena, $12.00.

Hive opener—premium, A. C. Turrill.

Destroy Queen-Cells to Prevent Increase.

CHAS. DADANT & SON.

We have repeatedly found that the cutting of the queen-cells when the colony is preparing to swarm has very little effect on them, for the reason that they start new ones, and, if crossed in their purpose, will even swarm with only eggs or larvæ in the queen-cells newly built.

If we return the swarm 48 hours after swarming, the queen-cells have been destroyed by the young queen, and the bees get rid of her or of the old one when the swarm is returned, the swarming fever being usually over by that time. If the young queen is not yet hatched when the swarm is returned, the old queen usually goes about the work of destroying all the queen-cells herself.

We do not know but that it would be safest to destroy all queen-cells before returning the swarm; but this should be attended to only a few hours before the returnimg of the swarm or it will be done to no purpose, as the bees have eggs and larvæ at hand from which they can rear new queens without end.

Our aim has always been to take the shortest way of arriving at our purpose, and we have found out two things:

1. Destroying the queen-cells to prevent swarming will avail nothing unless the season proves also unfavorable to the swarming fever, as the bees at once build new ones in the place of those that we have destroyed.

2. After the colony has swarmed it is sufficient to return the swarm after two days, to insure the destruction of the cells or of the young hatched queen, or of the old queen, at the bees' choice, except, perhaps, in isolated cases, which are exceptions to the rule.

Our objection to destroying the queen-cells and returning the swarm at once is, that the swarming fever is not over then, and it often happens that the bees simply begin the work over at once by building new queen-cells. If any one will try keeping the swarm 48 hours he will find much less need of repeating the operation, and will not need to remove queen-cells, since it is always, or nearly always, done by the queen. If he has ascertained that the bees have a queen already hatched, he can either destroy her or the old queen before returning the swarm.

Another objection to destroying the queen-cells in any case, is the difficulty of making sure of having found every one of them. As a matter of course, with a great deal of attention a bee-keeper can make sure of that; but it is hardly necessary to tell the reader that during the swarming season a bee-keeper has his hands full, even if he does not run a farm and a bee-supply shop besides.

The words "swarming fever" which we have used in the above are well known to practical bee-keepers. This term has been used by old masters, and fitly describes the condition of the bees when they are making preparations for swarming. These remarks are not intended for old bee-keepers, but for the many beginners who read these pages.

When the bees have the swarming fever, they have no rest till they succeed. We have divided a colony into three artificial swarms while they were making preparations for swarming, and each of these cast a swarm. It is this excitement that makes all attempts at prevention so futile on the part of the bee-keeper, unless the weather becomes unfavorable. But when the colony has swarmed, this excitement promptly goes down, unless they are still crowded and ill at ease, and for that reason the returning of the swarm is more likely to be successful, especially if the apiarist takes pains to give more room, more ventliation, and more shade, at this time. This rule is not infallible, but it is the best that we have ever found under these circumstances.—*Gleanings.*

Hamilton, Ills.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Oct. 7, 8.—Missouri State, at Sedalia, Mo.
J. W. Rouse, Sec., Mexico, Mo.

Oct. 10.—Capital, at Springfield, Ills.
C. E. Yocom, Sec., Sherman, Ills.

Oct. 14, 15.—S. W. Wisconsin, at Fennimore, Wis.
Benj. E. Rice, Sec., Boscobel, Wis.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

North American Bee-Keepers' Association

President—P. H. Elwood....Starkville, N. Y.
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon..Dowagiac, Mich.
Sec'y and Manager—T. G. Newman, Chicago.

Bee and Honey Gossip.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Small Yield from Horsemint.

Bees are booming here on wild morning-glory, sunflowers and cotton. Horsemint did not yield much honey this season. There was plenty of bloom, but the weather was too dry. Some of my Italians and hybrids gave me from 30 to 36 pounds of extracted-honey per colony. I secured very little comb-honey. We are having Indian Summer now. Willie Douglass.

Lexington, Tex., Sept. 12, 1891.

Honey Crop a Total Failure.

The honey crop is a total failure here this season. Bees seemed to be strong enough, and there were plenty of flowers, but they yielded no nectar. The weather was too cold and wet just when the flowers were in full bloom. Some colonies may gather honey enough for Winter stores, but most of them will have to be fed or starve. I had 2 colonies last Spring, each of which cast a prime swarm, and one of them cast an after-swarm, which I gave away. I now have 4 colonies, and two of them will require to be fed. I would like to hear from other portions of this State.

Denison, Iowa. Scott Wheeler.

Capturing Wild Bees.

There are lots of wild bees in this part of Washington in the woods. I wish to cut the trees and save the bees. I would like to know when is the best time to cut the trees? Whatever information you can give me that will help me to successfully capture these bees will be thankfully received.

Tenino, Wash. W. J. Trivelpiece.

[The best time to cut "bee trees" is in the Fall, after the stores are laid in for Winter. But it will hardly pay to cut them for the bees. With our modern improvements, you can rear bees more readily and more cheaply, too, if your time is worth anything, than to get them from the woods. If you desire to be fitted out with all the paraphernalia for bee-hunting, you cannot do better than to read A. I. Root's "A B C of Bee-Culture." Under the heading of "Bee-Hunting," you will find four pages of very interesting directions, and a description of the necessary implements. In this issue of the Bee Journal you will find an article on page 396, which will give nearly all the information you desire about securing the honey from bee-trees.—Ed.]

About Half a Crop.

Bees in this locality did poorly this year. They wintered well, and worked extremely well in April and up to May 10, and everything indicated a very profitable season, but after the latter period they did scarcely anything. I secured about half a crop of extracted-honey (30 pounds per colony), which is very black and unsalable. Bees now are in bad condition for wintering. One neighbor has lost all of his bees from starvation. Of course, he is one of the "old timers." All swarms in this region, and many old colonies, will perish unless fed. The cause of the failure in this locality in uncertain. We had plenty of rain, and an abundance of white clover and other blossoms. Perhaps the cold weather in *May* was the cause. An old friend of mine, who has kept bees for more than 50 years, says that he never knew a good honey crop *after* a *cold* May, and that a good honey-flow always follows a *warm* May. Has any of the old bee veterans made a like observation? Is this true? Does this apply only to this locality? Can any one give us light on this important problem? My locality is about 40 miles southeast of Columbus. R. B. Woodward.

Somerset, Ohio, Sept. 14, 1891.

Poor Season for Bee-Keepers.

This has been a poor season for bee-keepers in this locality. White clover did not yield well, and basswood only fairly. Many colonies of bees did not store more than 5 to 10 pounds of surplus, owing to lack of care in early Spring. I had 6 colonies last Spring, which increased to 10, and gave me 200 pounds of comb-honey. I fed 25 or 30 pounds of sugar to my bees.

Ridgeway, O. M. Limes.

Cure for Bee Palsy.

I have seen a good deal in your valvable periodical lately about the disease among bees known as "bee palsy." I would say that I had a colony very badly effected with it this Summer, and the following treatment cured them completely in four or five days: Take a small cotton cloth about 6 inches long, and put on one end of it a few drops of carbolic acid; shove that end into the entrance of the hive, leaving the other end out so that it can be easily withdrawn. Renew the acid night and morning until cured.

Matsqui, B. C. R. L. Codd.

Italian Bees are the Best.

I now have but one black queen in my apiary, and will soon supersede her with a young Italian queen, as I am satisfied that the Italians are the best bees. I have Italian queens from four of the most noted queen breeders in America, and also some fine queens of my own rearing. My object in buying queens from so many different breeders was to try the different strains of Italian blood, and I have found that by so doing I have produced some very fine bees, with the very best of honey-gathering qualities. I wrote to one of our best authorities on bee-culture—he is also one among our largest and best queen breeders—and asked him what he thought of my plan of buying queens from different men; his answer was that I certainly would improve my apiary. John D. A. Fisher.

Woodside, N. C., Sept. 9, 1891.

Smart-Weed.

I have read a great deal in the Bee Journal about smart-weed as a honey-plant, and have arrived at the conclusion that the correspondents do not always know what they are writing about. Adjoining, and in my apiary, I have set apart for weeds, a piece of ground about 4 rods square, and it now contains Spanish-needles, leaden-heart and smart-weed (or water pepper, as it is sometimes called). There are a great many persons who do not know the difference, and call them all smart-weed, but they are no more alike than corn and oats are alike. The leaden-heart opens its petals before the sun is up, but closes them after noon, and the bees revel on it. The smart-weed has a tiny blossom, on which I have yet to see one of my bees alight. Both of these weeds are of luxuriant growth, reaching a height of over 6 feet, as the soil is very rich, moist bottom land. I herewith mail you a small specimen of each, for your inspection. J. E. Prichard.

Port Norris, N. J.

[There are a great many species of smart-weed, belonging to the genus *Polygonum*, and although the specimens sent by Mr. Prichard reached the writer in a delapidated condition, they both appear to belong to it. The plant called leaden-heart is one of the large-blossomed smart-weeds, upon which bees could readily work, and the other is a species with very small blossoms.—Clarence M. Weed, State College, Hanover, N. H.]

Honey Crop Less than Last Season.

The honey crop is not as good this season as last. From 7 colonies of bees, I only secured 100 pounds of comb-honey, and 325 pounds of extracted-honey, and shall be obliged to feed the bees to prepare them for Winter. I get 20 cents per pound for comb-honey.

Birdsborough, Pa. C. C. Yost.

Losing in Weight.

Bees have done very poorly here this season. I had 33 colonies, Spring count, not one of which cast a swarm, and I will not get over 100 lbs. of honey, of very poor quality. Those colonies from which I took the honey, are short of stores for Winter, and the remaining colonies have about enough to last them until Spring. Golden-rod and the other Fall flowers do not appear to secrete much nectar. Have had a colony on the scales since July 17, and they have lost 7 pounds in weight.

CHARLES TAREY.

Houghton, N. Y., Sept. 12, 1891.

First Bee-Escape Patented.

I have just read friend Silcott's description of the first bee-escape invented! He is away off, as the first bee-escape of which we have any record, was patented June 26, 1860. (See recent number of *Gleanings*.) From Mr. Silcott's description, I judge it to be an antiquated affair. Instead of his patent covering modern escapes, it is quite likely that his was covered by the one of June 26, 1860, and that his is about as worthless as the "Grubb patent." So far, my new escape is the only one, ancient or modern, that successfully clears supers without springs, traps, or other complications.

C. H. DIBBERN.

Milan, Ills., Sept. 17, 1891.

Cause of Black, Shiny Bees.

I believe that the cause of the appearance of black, shiny bees is the material from which the bee was produced (known as honey-dew). The cause may commence in the queen being fed with it, or the larva, after the egg is hatched. But I am satisfied that honey-dew is somehow the cause, though no one has yet given that as their opinion. I have seen a bee which seemed to have swam through black oil, come to the entrance of the hive, and three, four or more would seem to lick and bite her all over, and some would leave her, and others take their place, showing that they had a desire to do something for her, which she could not do for herself; and when they were disposed to leave her alone, she continued to plume, clean and dress herself for a long and tiresome time, among the other bees, showing, as I believe, that she was at her own home, and was not, and never had been, a robber, or an old, hairless bee. I believe I have seen many of them that had never before taken a flight from their hive, and though in all other respects they seemed perfectly well, yet they failed to fly, and went hopping about the yard. I have seen a very few acting like workers, yet have not seen one carrying pollen. I have never seen any of them act sick or die as if old or diseased, and am very sure the cause of their appearance may be found in honey-dew.

F. BENJAMIN.

Rockford, Ills.

Propolis on Comb-Honey.

This season I have produced considerable comb-honey, but as a general thing it has proved unsatisfactory, being covered with propolis which cannot be got off. Now, what I want to know is, how can I produce comb-honey without having it all covered with propolis on top and comb on the bottom?

EZRA J. HOLLENBECK.

Elk Rapids, Mich.

[The excellent article on this subject, by G. M. Doolittle, on page 395, will give the desired information.—ED.]

Let the Truth be Known.

I have just finished reading the able and pointed article from the pen of Henry Alley, on page 330. I think Mr. Alley's proposition a fair one, and any bee-keeper who thinks Mr. Alley is wrong in regard to the yellow stripe, now has an opportunity to bring that fact to light, and at the same time be well paid for so doing. By-the-by, this discussion about yellow bands is bringing facts to light. Let us have the truth, brethren, for "truth crushed to earth will rise again."

JOHN D. A. FISHER.

Woodside, N. C.

Fine Display of Bees and Honey.

At our County Fair and Flax Palace Exposition, held last week at this place, the industry of bee-keeping was well represented. W. W. Wright and myself "doubled teams," fitted up a booth in the Flax Palace, and exhibited bees, honey, and all the modern fixtures. Our booth was artistically decorated with honey-plants, fruits, and various implements and adjuncts to an apiary, and was constantly visited by a curious and delighted crowd. We received many compliments for the unique display. Our "firm name" (for this occasion) was wrought out in rustic wax work by one of the younger Secors, who was spending the vacation at home. Many people said it was the finest display in the building.

EUGENE SECOR.

Forest City, Iowa, Sept. 15, 1891.

Wavelets of News.

To Get Rid of Rats.

Catch one in an ordinary box trap and smear it with soft pine tar all over except head. Then turn it loose where caught. I assure you, you will not be troubled with rats very long. I tried it last Fall, and in three days after there was no rat to be seen, nor has any been seen since.—*Practical Farmer.*

Get Young Bees for Winter.

This is the month to prepare your bees for Winter. See that you have plenty of young bees. Feed for stimulation. Encourage your queens to lay, in order to have plenty of young brood for wintering. Get everything in good condition. Re-queen where necessary. Queens are cheap at this season.—Dr. J. W. Vance, in *Wisconsin Farmer.*

Bee-Tent for the Apiary.

A correspondent from Fort Mohave, Arizona, writes to ask if bees would do well in his locality, where the heat in Summer goes to 115° and 120°, and he asks if this would not melt the combs. If there is plenty of bee-forage, the bees would do just as well with him as anywhere else, but the hives should be shaded from the sun's rays; and if there are no trees near, plant vines on the sunny side of the hives, or fix up something to shade the hives from the heat of the sun. Most of my hives are placed under the shadow of a row of cypress trees, which makes it pleasant to work among them, as well as preventing the melting of combs by the sun's heat. All hives should be shaded from the sun's rays. The natural home of the honey-bee is under the shade of forest trees.

The queen being the mother of the whole colony, it is important that every colony should have a young, vigorous queen. Never keep a slow-laying queen, or one which lays her eggs at random.

A good, prolific queen lays her eggs all in one direction, almost invariably with her head toward the bottom of the hive, therefore, her eggs are always straight up and down like the print on this paper. Whenever you see eggs laid crosswise, or in every direction in the cells, your queen is not a good one, or very probably you have a laying worker in that hive.

Be very careful when opening your hives at this time of the year that you do not set your bees to robbing. An almost indispensable article in the apiary is a bee-tent (to set over a hive when opening it) to keep off robbers.—Wm. Styan, in the *Pacific Rural Press.*

Feeding and Preparing Bees for Winter

The result of the season here is one-half crop of white honey, and no surplus Fall honey. The hives are generally stored with honey for Winter, but a portion are light in honey, and the bees must be fed if we wish to save them for next year's work.

Sugar syrup, made by adding 10 pounds water to 20 pounds granulated sugar, bringing it to a boil and then adding 5 pounds cheap honey, makes the cheapest feed for Winter stores. Fifty cents' worth of this feed will make light colonies safe for Winter; and as the destitute ones are generally those that produced our surplus honey, humanity as well as interest demands that we should not let our pets perish for want of this small expense.

I must caution apiarists not to wait until too late to do the necessary work of preparing bees for Winter, for now is the time to prepare colonies for effective work next year. We have no faith in getting paying results from bees that come out just alive in the Spring.

We see more clearly each year that the colonies that pay are those that come out in the Spring strong in bees, and with sufficient stores to need but little tinkering. With that end in view, I shall unite all weak colonies and make them strong in bees and heavy in stores, and now is the time to do it with the least work and secure the best results.—B. Taylor, in *Farm Stock and Home.*

Large Crop of Honey.

W. J. Pickard left for New York a few days ago, where he will dispose of the two carloads of honey which he shipped to that place last week. The shipment consisted of 60,000 pounds of extracted basswood honey, and is the largest ever made from this city. Of this great amount of honey, 31,000 pounds is the product of Mrs. Pickard's apiary near this city. Formerly Mr. Pickard sold his honey at Cincinnati, but the last two or three shipments he has disposed of in New York, which is a better market. Mr. Pickard says Wisconsin ranks second among the States, in the production of honey, New York being first.—*Richland* (Wis.) *Observer.*

Florida as a Honey Country.

Florida is a land of flowers and has many successful bee-keepers. Some Northern bee-keepers who were disgusted with their bees being destroyed by the severe cold, emigrated thither expecting to find a perfect paradise, were surprised that even there they had obstacles to contend against.

While attending a convention at New Orleans, during the World's Fair there, I met an extensive honey producer from the Indian River country, who said that their best honey districts were malarious and infested by insects, mosquitoes, sand flies, jiggers, etc.

One of the greatest sources of honey in Florida is the black mangrove, which grows in the water, and bee-keepers were badly disappointed by its being frozen a few years since.

There are large apiaries in the vicinity of East St. Andrews Bay, and the bees gather honey from the orange groves. This honey is of good body and flavor, but not equal to the white clover honey of the North, in my opinion.

Owing to the dampness of the climate, honey producers secure the most of their surplus in the extracted form.—Mrs. L Harrison in the *Prairie Farmer.*

How Beeswax is Made.

One of the most interesting productions of a colony of bees, and perhaps one of the most curious, is that of making the wax which forms the receptacles for the nectar that the bees gather from every opening flower, and which, when melted, forms the beeswax of commerce.

If you examine the under surface of a cell-building worker-bee, you will find beneath the abdomen four pairs of white plates projecting from as many pockets in the rings of this part of the body. These are wax-plates made from the life-blood of the worker.

If you now examine with a lens one of the hind legs you will find that the stoutest joints are "square-shouldered" at the hinge, and that the hinge is well over to one side, so that the shoulders form a pair of jaws which open when the limb is bent, and close when it is straightened. The upper jaw has a row of spines which bite on a plate on the lower jaw. With this apparatus—by piercing it with these spines—the worker-bee withdraws a wax-plate from its pocket, transfers it to the front legs and then to the mouth, where it is laboriously masticated with a salivary secretion. Unless it undergoes this process it lacks the quality requisite for cell-building. Few people would imagine that the tons upon tons of this article which is produced in the United States originates from such a minute and wonderful laboratory of Nature.—Wm. Styan, in *Pacific Rural Press.*

Bee-Culture in Arizona.

The people of the Salt River Valley probably do not know the result of one year's co-operative work of the Bee-Keeper's Association of Maricopa County, Arizona.

It is just about one year ago that after a very hard struggle one carload of honey was shipped from this valley by this association.

For a long time it was hard to make the individual growers understand the advantage of co-operation, and it was only by experience that it finally dawned upon them. This year there has been shipped to date seven carloads of extracted and comb-honey, aggregating 217,236 pounds, which we understand has netted the shippers an average of about 9 cents per pound over all expenses, or about $13,000.

This is the natural home of the bee, and there is no reason why this industry should not continue to increase for years to come, as the quality of Arizona honey is said to be superior to any other. While the amount is small, yet it shows that we can sell our products at a profit, if we raise the right kind.—*Phœnix Republican.*

.Bee-Pasturage for California.

The Chapman honey-plant is a fraud; plants self-sown two years ago are weak and of little account. Our experiments with it have not been a success, and how in the wide world the plant obtained the reputation it did, as a nectar producer, we do not understand.

It will be remembered that the United States Government purchased quite a large quantity of seed from Mr. Chapman, which was widely distributed by the Agricultural Department to the bee-keepers of the country. So far we have heard no favorable report of it from any quarter. The plant does not seem suited to the soil or climate of Southern California. We have a few plants yet living out of three different sowings in different years, and watch for any good results. In time to come, possibly, it may be acclimated.

The Bell-flower, indigenious to Cuba, has a great reputation as a honey-producer, and would doubtless prove of value in this climate. We procured some seed two years ago and distributed it among florists for propagation, but none of the seed germinated. Other attempts to propagate may produce better results.

The Hoya Cornosa or wax plant exceeds any bloom we know of in the production of nectar, except the bloom of the banana. The former may be readily propagated from leaves or slips, though it is of slow growth; but to make amends for this, the plant lives long and prospers under proper treatment. The older it grows the more it blooms, and the greater quantity of nectar seems to be secreted. We have a plant that was in bloom when purchased, 16 years ago, and though often neglectd and poorly treated, it is to-day profuse in bloom, and very vigorous in growth, and it seems to adapt itself to very warm weather, though it does not prosper unless somewhat sheltered from the hot sun.—C. N. Wilson, in the *Pacific Rural Press.*

September Work in the Apiary.

During the earlier part of this month the apiarist should look over all his colonies and see that every one has a good laying queen. If any are missing they should be supplied with one at once. Do not defer it, as it is very important that they should have one in time to have plenty of brood by the time cold weather begins.

The amount of honey each hive contains should also be carefully noted, and marked on it. The only accurate way to tell how much each hive contains is to weigh several combs, of different amounts of honey, and thus get a good idea of the quantity contained in the frames. Then take out every frame in the hive, one at a time and add the amounts together. This will enable you to guess at the quantity contained in each one pretty accurately.

Then each colony should be fed enough sugar syrup to make 20 or 25 pounds of food per colony. The best feed that can be given is good. "confectionery A" sugar syrup. To make this, take 4 pounds sugar and 1 quart of water and heat until it just begins to boil. This is all that is necessary. If you have a good queen in each colony, and bees to cover eight or ten frames, with 25 pounds of good honey or sugar syrup there is scarcely any risk in wintering every one of them.—*Indiana Farmer.*

Uniting After-Swarms.

There may be after-swarms, having young, vigorous queens, which are not populous enough to keep up the required heat during the Winter, or have not sufficient stores to last until flowers bloom, which may be utilized in this way: Remove the old queen who has served her day and generation, and introduce the young one. Many old queens die during the Winter, and it is discovered in the Spring that the colony has laying workers. The young queen should be caught and caged, the old one destroyed, and the caged one put between the frames.

In whatever way the queen-cage is made, it should be plugged up with candy, in such a way that the bees may release the imprisoned queen at leisure, and the colony should not be disturbed for several days.

Many a fine queen has lost her life by the hive being opened too soon, which frightened the bees and caused them to ball and destroy her. When the young queens have been removed from the after-swarms, the hives containing the bees should be brought together, and hay or grass put over the entrances to cause them to mark their location.

After a day or two, select the combs containing brood, if there is any, and those with the most honey in them, and put them together in an unoccupied hive. The bees should all be brushed off in front of it, and driven in with a little smoke.—*Orange Judd Farmer.*

Convention Notices.

☞ The Capital Bee-Keepers' Association will meet in the Supervisors' Room of the Court House, at Springfield, Ills., on Oct. 10, 1891, at 10 a.m.

C. E. Yocom, Sec., Sherman, Ills.

☞ The Southwestern Wisconsin Bee-Keepers' Association will hold its next meeting on Wednesday and Thursday, Oct. 14 and 15, 1891, at Fennimore, Grant Co., Wis.

Benj. E. Rice, Sec., Boscobel, Wis.

☞ The 5th semi-annual convention of the Missouri State Bee-Keepers' Association will be held at Sedalia, Mo., on Wednesday and Thursday, Oct. 7 and 8, 1891. Rates for those attending are promised at the Sicher and Kaiser Hotels at $1.50 per day each. All persons so desiring are requested to make apiarian exhibits. A cordial invitation to attend the convention is extended to everybody.

J. W. Rouse. Sec., Mexico, Mo.

☞ The Northwestern Bee-Keepers' Society will hold its annual convention at the Commercial Hotel, corner of Lake and Dearborn Streets, in Chicago, Ills., on Thursday and Friday, Nov. 19 and 20, at 9 a.m. Arrangements have been made with the Hotel for back room, one bed, two persons, $1.75 per day, each; front room, $2.00 per day for each person. This date occurs during the Exposition, when excursion rates on the railroads will be one fare for the round-trip.

W. Z. Hutchinson, Sec.

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OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

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Advertisements intended for next week must reach this office by Saturday of this week.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

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☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to pay for another year.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. It costs:

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" 100 colonies (220 pages)	1 25
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☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

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The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The **7** above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
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Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75
Orange Judd Farmer	2 00	1 75
Farm, Field and Stockman	2 00	1 75
Prairie Farmer	2 00	1 75
Illustrated Home Journal	1 50	1 35
American Garden	2 50	2 00
Rural New Yorker	2 50	2 00
Nebraska Bee-Keeper	1 50	1 35

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

◆

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

◆

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

◆

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00. For sale at this office.

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

The Bee-Keepers' Directory, by Henry Alley, Wenham, Mass. It contains his method for rearing queens in full colonies, while a fertile queen has possession of the combs. Price by mail, 50 cents.

Binders made especially for the BEE JOURNAL for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the BEE JOURNAL (with $1.00 to pay for the same), or 2 subscribers to the HOME JOURNAL may be sent instead of one for the BEE JOURNAL.

YOU NEED an Apiary Register, and should keep it posted up, so as to be able to know all about any colony of bees in your yard at a moment's notice. It devotes two pages to every colony. You can get one large enough for 50 colonies for a dollar, bound in full leather and postage paid. Send for one before you forget it, and put it to a good use. Let it contain all that you will want to know about your bees—including a cash account. We will send you one large enough for 100 colonies for $1.25; or for 200 colonies for $1.50. *Order one now.*

Here is the acknowledgement of the first premium on our new Rebus in the HOME JOURNAL:

HARVARD, Nebr., Sept. 14, 1891.

THOMAS G. NEWMAN & SON—*Gentlemen*:—Your favor of the 12th inst. is received, informing me of my correct answer to your rebus, and enclosing check for $10. Thanks.

Yours respectfully,
J. S. CATTERSON.

Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ The sewing machine I got of you still gives excellent satisfaction—W. J PATTERSON, Sullivan, Ills.

Pleasant Employment at Good Pay.—The publishers of SEED-TIME AND HARVEST, an old established monthly, determined to greatly increase their subscription lists, will employ a number of active agents for the ensuing six months at $50.00 PER MONTH or more if their services warrant it. To insure active work an additional cash prize of $100 will be awarded the agent who obtains the largest number of subscribers. "The early bird gets the worm." Send four silver dimes, or twenty 2-cent stamps with your application, stating your age and territory desired, naming some prominent business man as reference as to your capabilities, and we will give you a trial. The 40 cents pays your own subscription and you will receive full particulars. Address

SEED-TIME AND HARVEST,
10A8t La Plume, Pa.

HONEY AND BEESWAX MARKET.

NEW YORK, Sept. 18.—Comb-honey now arriving. Extracted in good supply, with limited demand. We quote: Comb, fancy white, 1-lb., 15@16c; 2-lb., 13@14c; fair white, 1-lb., 13@14c; 2-lb., 12c. Extracted—California, basswood and orange bloom, 7@7½c; common Southern, 65@70c ℔ gal.; choice, 70@75c. Beeswax, dull, 25@26c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, Sept. 19.—The demand for 1-℔. comb-honey is fair, and receipts light; demand for extracted greater than supply. We quote: White 1-lb. comb, 15@16c; dark, 10@12c. Extracted, 5@7½c. Beeswax, 23@25c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Sept. 19.—Demand is good, with fair supply. We quote: Choice comb, 14@16c. Extracted, 5@8c. Beeswax is in fair demand and good supply, at 23@25c for good to choice yellow.
C. F. MUTH & SON,
Cor. Freeman & Central Aves.

NEW YORK, Sept. 18.—Demand for honey is increasing, but is exceeded by supply. We quote: Fancy 1-lb. comb, 15@16c; 2-℔., 14c; fair, 1℔., 13@14c; 2-℔., 13c. Extracted—California, 7c; clover and basswood, 7@7½c. Beeswax—in fair demand, with adequate supply, at 25@27c.
CHAS. ISRAEL & BROS., 110 Hudson St.

CHICAGO, Sept. 19.—Demand is active for white comb-honey; supply limited. We quote: Fancy, 16c; other grades 14@15c. Extracted, 7@8c. Beeswax, quick sale, at 26@27c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Sept. 19.—The demand is good, with light supply. We quote: Comb—1-lb. white, 16c; dark, 12c; 2 lb. white, 14c; dark, 10c. Extracted—white, 7c; dark, 5@6c. Beeswax, supply and demand light, at 25@26c.
HAMBLIN & BEARSS, 514 Walnut St.

DETROIT, Sept. 18.—The demand for comb-honey is fair and supply good. We quote: Comb, 12@13c; extracted, 7@8c. Beeswax in good supply, and light demand, at 25@26c.
M. H. HUNT, Bell Branch, Mich.

CHICAGO, Sept. 19.—The demand is slow for 1-℔. comb-honey, with good supply. We quote: Choice white comb, 14@16c. Extracted, 6@8c. Beeswax, in light supply, and demand slow, at 27c. J. A. LAMON, 44-46 S. Water St.

ALBANY, N. Y., Sept. 18.—Demand improving; supply moderate. We quote: White comb, 12@17c. Extracted, 7@8c. Beeswax, scarce and in good demand at 28c.
H. R. WRIGHT, 326-328 Broadway.

NEW YORK, Sept. 18.—Demand good, with fair supply. We quote: No. 1 comb, 16c; No. 2, 13@14c. Extracted—California, 7@7¼c; basswood, 7¼@8c; Southern, 65@70c per gal. Beeswax, supply and demand fair, 26½@27c.
F. G. STROHMEYER & CO., 122 Water St.

SAN FRANCISCO, Sept. 14.—Demand good, supply small. We quote: Comb, 1-lb., 12@14c. Extracted, 5¾@6½c. Beeswax, in light supply and fair demand, at 23c.
SCHACHT, LEMCKE & STEINER,
16 Drumm Street.

CHICAGO, Sept. 19.—Demand is now good, supply is not heavy. We quote: Comb, best grades, 15@16c. Extracted, 6@8c. Beeswax, 26@27c.
R. A. BURNETT, 161 S. Water St.

BOSTON, Sept. 18.—Demand good, supply ample. We quote: 1-℔. fancy white comb, 15@16c; extracted, 7@9c. Beeswax, none in market.
BLAKE & RIPLEY, 57 Chatham St.

NEW YORK, Sept. 18.—Demand increasing, supply light; very little No. 1 white comb-honey arriving. We quote: Fancy 1-lb. comb, 18c; second quality, 15@16c; buckwheat, 1℔. 11@12c. Extracted—in good demand at 6@8c for white. Beeswax, in light supply and good demand, at 27@30c for choice yellow.
F. I. SAGE & SON, 183 Reade St.

We Club the American Bee Journal and the Illustrated Home Journal, one year for $1.35. Both of these and Gleanings in Bee Culture, for one year, for $2.15.

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms.

☞ The Union or Family Scale has been received, and I am much pleased with it. W. H. KIMBALL.
Davenport, Iowa.

Red Labels are quite attractive for Pails which hold from 1 to 10 lbs. of honey. Price, $1.00 per hundred, with name and address printed. Sample free.

Very Punctual.—I was surprised to receive the feeder as soon as I did. I like it very well. I receive mail matter in a shorter time from you than from Carlisle, O., only eight miles from here.
JOHN H. ROHRER.
Tippecanoe City, O., July 16, 1891.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line,** for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

WANTED—TO SELL—A 40-acre fruit and honey farm; good market; no failure in six years' experience. For full particulars write to H. C. WILLIAMS, Marshall, Saline Co., Mo. 13A5t

WANTED.—We will pay the highest market price for extracted-honey. Send sample, quantity and price, BALDWIN & AVERY, Independence, Mo. 12A2t

ONE COLONY Saved from Death the Coming Winter Would Repay the cost of a copy of "ADVANCED BEE CULTURE" ten Times Over. In 5 of its 32 Chapters may be Found the Best That is Known upon Wintering Bees. It costs 50 cents but its Perusal may Make you $50 Richer next Spring. The "REVIEW" and this Book for $1.25. If not Acquainted with the "REVIEW," send for Samples. W. Z. HUTCHINSON, Flint, Michigan.

9Dtf *Mention the American Bee Journal.*

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This book will be mailed on receipt of price. We also offer it as a Premium on 6 new subsubscribers to this Journal. If this Premium is desired on a smaller number of subscription, the cash can be remitted—pro-rata to cover the deficiency. 17A—5Mtf

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A valuable book for Farmers, pertaining to the law of all the States affecting their interests. This volume will be a good investment for any farmer, and should certainly be purchased by every Farmers' Club and Grange Library.

As one of the leading Agricultural Magazines says, "We do not know of a book which would be more useful, or save a farmer more money in the long run than Mr. Austin's."

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THOMAS G. NEWMAN,
EDITOR.

Vol. XXVIII. Oct. 1, 1891. No. 14.

Editorial Buzzings.

A Swarm of bees that was captured in Birmingham, the other day, weighed 25 pounds.

Ex-Judge Douglass Boadman, of Ithaca, N. Y., departed this life on Sept. 4, aged 69 years. The deceased presided as Justice in the Supreme Court on the trial of the Rich *vs.* Olmsted case. The jury gave the verdict of 6 cents against Mr. Rich.

Golden-Rod and asters are yielding honey profusely now in some localities. Recent reports of the Fall crop of honey are very encouraging. Bees, in places where Fall flowers abound, will be well supplied with Winter stores. The late warm spell has been very valuable to fruit and flowers. Where there has been no rain, it has dried up vegetation, and some prairie fires have resulted.

Foreign Mails.—The Government has just issued orders to the Customs Department of the Postoffice, to confiscate all photographs, prints, and other reproductions of artistic or natural objects coming per mail; and stating that in future they must be sent by express company, and regular customs entry and duty paid on import going through the United States stores.

This Rule does no good, and much harm. Just think of the abominable administrative tyranny of confiscating a private letter from Europe, for instance, simply because it contained a photograph of father or mother, wife or child, who happened to be over there! It is an outrage and a scandal upon our pretensions to civilization.

We well know what it means to import small packages by express. The delays in delivering, the Custom House exactions and broker's charges, the days wasted in waiting for what should be promptly received, are discouraging and exasperating.

Huber's Letters on apiculture were republished as a supplement in the "International Review of Apiculture" for April, 1891, by our friend Ed. Bertrand, of Nyon, Switzerland.

Montana bee-keepers are invited by A. M. Day, of Brunswick, Mo., to write to him concerning the valleys near Helena, and describe their pasturage for bees, and fitness for bee-keeping.

Rain was forced from the clouds by exploding bombs last week, in Kansas and Texas, thoroughly soaking the ground, which has been suffering intensely from drouth. We have not only harnessed the lightning, compelling it to draw our carriages and run our mills, but we now also arrest the clouds and compel them to discharge their accumulated moisture and refresh the parched earth, when and where we desire it. Surely, this is an age of wonders.

Hives and Bees were swept away by a freshet. An agreement was made to purchase the swarms issuing this year, but there are none left to deliver. A correspondent asks this question:

> MR. EDITOR:—I would like to ask you the following questions about an agreement for bees. I made a bargain for 30 swarms, and furnished my own hives to put them in at $2 a swarm. They were to remain there until Fall, when I was to pay for them and bring them home. There was a freshet about the middle of August, which swept bees and bee-hives away. Now, should I be held to pay for the bees? If so, is he not responsible for my hives? They were in his possession.

If we understand the question from the statement of one party, we would say that in equity and justice the one should lose the bees and the other the hives.

The party who sold the bees was to deliver them when called for in the Fall. By means of a calamity, nature having destroyed them, he has no bees to deliver, and cannot make a good claim for the payment without tendering the bees—an impossibility!

It would be more equitable for the party having had the hives in his possession before they were washed away, to pay for them, than for the one who agreed to pay for and take the bees in the Fall (but which were never delivered to him) to be asked to pay for them without delivery, after the calamity.

We think that you should leave it as nature has left it, and call it square; thus *dividing the loss.*

Secretaries of affiliated societies (if they have not already done so) should at once send their present addresses to the Secretary of the "North American Bee-Keepers' Association" (C. P. Dadant, Hamilton, Hancock County, Ills.), in order to receive the new medals to which each association is entitled. He will forward them by registered mail as soon as the Secretaries are heard from.

Nothing New under the Sun, was an assertion of "ye olden time," before the advent of books or printing. It seems as though, in bee-keeping at least, there was considerable truth in that idea. It is very often the case that things considered quite new and original have been discovered, presented and described long ago; then they have been buried up for years, when, lo, some one discovers them afresh, and puts them to work, perhaps, with new combination, and they "go" without much opportunity to find their history in the "forgotten past." In this connection we reproduce from the *Rural Californian*, the following from C. N. Wilson:

> How often, when we think we have invented something new, we find by referring to Quinby or Langstroth, that the idea was first originated by them.
>
> There is a strong tendency now toward the flat cover. This we find described in Langstroth's work, issued away back in 1852. This flat cover is all complete, with cleats nailed on the end.
>
> Everybody now-a-days seems to be going back to the eight-frame idea. Why, that came from Moses Quinby, L. L. Langstroth and Adam Grimm, away back in the '60's.
>
> Thick and wide top-bars is another new fad. Still, we find essentially the same thing described in Langstroth's book.
>
> Chancing a few days ago to look over some old hives—some that were made after Langstroth's early instruction—we observed that the frames all had top-bars 1 1/16 inches wide and ⅜ of an inch deep. The combs had been cut out of these frames, but by the propolis accumulations on them, it was evident that they had been used for a number of years. The remarkable part about it all is that they should bear no traces of burr-combs.
>
> Again, there is a very strong tendency towards fixed distances. Here, again, we are going back to father Quinby. Why in the world did we not catch on to these things earlier? Langstroth and Quinby were so generally right.

The Tama County Fair will be held at Toledo, Iowa, Sept. 29 and 30, and Oct. 1, 1891. Will it have a good exhibit of honey?

Spraying Fruit is again being discussed, but from another standpoint. In New York, on Sept. 24, a lot of grapes showed signs of poison on the stems, and tons of them were destroyed by the Health Board. It subsequently developed that the poison with which the grapes had been sprayed was not Paris green or London purple, but what was called the Bordeaux mixture, a milder form of poison. The following is from the telegraphic report in the daily papers:

> The Health Board experts do not undertake to say that the Bordeaux mixture is dangerous if properly used. It is supposed to be all right if used at the right time, which is when the grapes are just beginning to form, for the destruction of phylloxera and other insects which attack young and growing tendrils when they are very soft. But it seems probable that the farmers who have used it supposed that if it was a good thing once, in small quantities, it would be a better thing twice, in large doses. It is a mixture of sulphate of copper and lime. The inspection of the fruit already on the market will be continued, and all that is found to be coppered will be destroyed.

Fruit-growers should be warned by this incident. It is a criminal act to jeopardize the public health or life; and because they may lightly spray grape vines, just as the fruit begins to form, when it is soft and tender; they should not presume to douse the fruit with larger doses just before sending it to market—endangering human health and life!

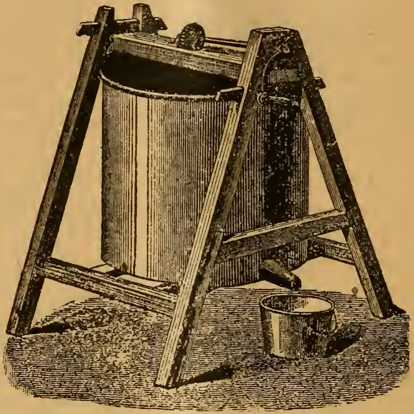
We will add—because they may lightly spray fruit trees in the Spring when the fruit is forming, to prevent the ravages of the curculio—they *must not presume to spray the blossoms with poison*, thereby endangering the lives of millions of bees, and at the same time doing no good whatever! The curculio works on the fruit—not on the blossoms!

Should the bees deposit some of the nectar from the poisoned trees in the surplus combs, and these combs find their way to consumers, the law would hold the fruit-growers responsible for the damages!

Let the tons of grapes destroyed last week in New York be a *warning* to all.

◆

It is Interesting to see the implements used by apiarists in different countries. The engraving presented herewith is copied from *l'Auxiliaire de Apiculteur* for last month, and shows



the honey extractor now in use in France and Italy, invented by Prof. Sartori. It is very primitive in appearance, but it is substantial and practical.

◆

The Shortage in the honey crop is very pronounced in the Western States, from whence usually comes the bulk of the honey crop. A leading apiarist of Iowa was asked by a reporter for the cause of the failure, and this was his reply:

> We cannot explain it. It is inexplicable. Last year, dry weather and a scarcity of flowers had something to do with it, but this year there is an abundant flora. Bees usually draw pounds of sweetness from white clover, but although the fields were white with the blossoms, there was no honey in it. This is the story that comes from all parts of the country.
>
> There have, occasionally in the past, been years when there was but little honey in the flowers, and when the bees had little surplus honey, but I have never known two successive years in

which this was true to the extent that it is in 1890-91. Last year there was a local scarcity of honey. The bees did not have enough to serve them as food during the following Winter, to say nothing of any surplus for sale. Last Winter we had to feed sugar to the bees, and this coming Winter we shall have to feed them more. The scarcity of honey this year is not only local—it is national. You may tell the housewives that honey is going to be very scarce and high this year.

◆

About a Year Ago we noted the fact on page 707 of the BEE JOURNAL, that the apiarists of Switzerland and America assembled in annual convocation on the same day—at Lausanne and Keokuk. We then addressed a letter to our friend and colaborer, Mr. Ed. Bertrand, editor of the *International Review*, and enclosed a copy of our address on "Fifty Years' Progress in Apiculture," intending to have it read in both conventions at the same time. By the *International Review* we notice that it arrived in Switzerland one day too late for that assembly. It was, however, presented at the next meeting, and here is a translation of the item concerning it from the *International Review*, page 180, which arrived during our late trip to New Jersey, or it would have received earlier attention:

Mr. Bertrand asked permission to present a retrospective communication as follows:

"Our last assembly at Lausanne occurred on Oct. 30, the same day as the convention of the American apiarists at Keokuk. Mr. Thomas G. Newman, the eminent editor of the AMERICAN BEE JOURNAL, mentioned the coincidence in his JOURNAL, and on that occasion addressed a charming letter to me, which, unfortunately, did not arrive until the day after our reunion. He also sent to me the text of his address given at Keokuk, entitled "Fifty Years' Progress in Apiculture."

It is just 11 years since he assisted at our Reunion at l'Hotel de France, and through me he presents his fraternal salutations to Swiss apiarists, particularly to those with whom he then had the pleasure of becoming acquainted. I am sure that all of us who met him at Lausanne 11 years ago, are happy to receive these new assurances of Mr. Newman's esteem and friendship.

Mr. Nouguier, and a number of the older members, thanked Mr. Newman for his kind remembrance, and requested Mr. Bertrand to convey to him their best wishes and salutations (applause).

◆

Mr. Dibbern is now at work on a new bee-escape, which he calls the "American Super Clearer," and he thinks it will supersede all others.

◆

Crops.—A leading agricultural journal estimates that the produce of our farmers will be worth one billion dollars more this year than ever before.

◆

Punic Bees are getting some hard blows from good apiarists.

◆

Mosquitoes, which delight in disturbing sleeping humanity, can easily be foiled by using a Globe Bee-Veil.

◆

Disgusted.—Last January the *Bee World* was started as a monthly bee-periodical. It omitted issues in February and June, and died after publishing the July number, as will be seen by the following just received:

WAYNESBURG, PA., Sept. 25, 1891.

I have discontinued the *Bee World*. You will please stop sending me your AMERICAN BEE JOURNAL, as I am going out of the bee-business.

W. S. VANDRUFF.

◆

Few Young Mothers have access to the latest information regarding the diet of infants and young children, and it is therefore with pleasure we recommend for the perusal of all who have anything to do with children, the exhaustive article "How and What to Feed the Baby," in the October number of *Demorest's Monthly Magazine*. It is published by W. Jennings Demorest, at 15 East 14th St., New York. Price 20 cents. For sale by newsdealers.

The Wasp and the Bee.

A wasp met a bee that was buzzing by,
And he said, "Little cousin, can you tell me why
You are loved so much better by people than I?"

"My back shines as bright and as yellow as gold,
And my shape is most elegant, too, to behold,
Yet nobody likes me for that, I am told."

"Ah, cousin," the bee said, "'tis all very true;
But if I had half as much mischief to do
Indeed, they would love me no better than you."

—Observer.

Queries and Replies.

Width and Thickness of Top-Bars.

Query 786.—What width and thickness of top-bar is preferable for brood-frames?—Penn.

I prefer an inch.—M. Mahin.

I use ⅞x⅞ inches.—J. M. Hambaugh.

I prefer them ⅞x1⅛ inches.—Mrs. L. Harrison.

Not less than 1 inch wide and ⅞ thick.—C. C. Miller.

I do not know. I use them as light as possible.—R. L. Taylor.

I use top-bars 1 inch wide and 5/16 thick, and desire no change.—G. M. Doolittle.

I use 1x¾ inch thick, and like them very much. My top and bottom-bars are alike and invertible.—C. H. Dibbern.

One inch wide and ⅜ to ½ inch thick, according to the length of the top-bar, and the weight it must bear.—G. L. Tinker.

We use ⅞ inch width and ⅝ thick, but a wide top-bar is very good. A 1⅛ top-bar will almost do away with burr-combs.—Dadant & Son.

It depends on the size and depth of the frame. The full size Langstroth, 1⅛ wide by 1 inch deep will make a top-bar that will not sag.—Eugene Secor.

I would like to have the top-bars of my standard size frames about ½ inch thick and 1 inch wide. As I now have them they are ⅜x⅞, and many of them have sagged, and therefore do not "space" as accurately as I could wish. —G. W. Demaree.

I prefer a top-bar ⅜ thick and ⅞ inches wide, if an open top-bar; but if closed-end top-bar, 1½ inches wide. I also recommend the triangular comb-guide.—J. P. H. Brown.

This is a mooted question. With my experience I should say ⅞ wide, and thick enough never to sag. Then I should use slatted queen-excluding honey-board.—A. J. Cook.

As a rule, ⅞ wide, and as for thickness or depth, that depends upon the style of hive and frame. For the Langstroth frame, I prefer ⅝ to ⅞, exclusive of any guide, if any modern guide should be used.—James Heddon.

With the exception of a few ⅞ of an inch square, used for two seasons as an experiment, I have used those that were either ⅜ or ½ an inch thick. If I did not use a wood-zinc queen-excluding honey-board between brood-nest and super, I believe that (with my limited experience) I should try the thick top-bars and no honey-board.—A. B. Mason.

I prefer ½ inch to ¾ inch thick, and ⅞ inch wide. I find the above thickness gives ample strength for the ordinary Langstroth frame. A longer frame might need to be a little thicker, though I think not. I have found ⅜ inch thick, wired and braced Langstroth frames amply thick in my own hives.—J. E. Pond.

The thin top-bar "craze" held sway for a long time, but now it may safely be said to have passed away. Nearly all apiarists now agree that thick top-bars are essential. Our preference has always been for the V-shaped top-bar, ⅞ of an inch wide, and 1 inch deep, because it never sags, and is very convenient and substantial. Now, the "craze" is reversed, and thick top-bars are demanded. Those in the dovetailed hive are 1 inch wide and ⅞ of an inch deep, exclusive of comb-guide.—The Editor.

The Northwestern Convention will be held in Chicago on Nov. 19. Let every bee-keeper in the Northwest make arrangements to visit the metropolis on that date, and attend the bee-keepers' love-feast. It will be held at the Commercial Hotel. See official notice on page 440.

Topics of Interest.

Iowa State Bee-Keepers' Convention.

J. W. BITTENBENDER.

The Ninth Annual Convention of the Iowa bee-keepers met in their tent on the State Fair Ground, at Des Moines, on Tuesday, Sept. 1, 1891.

Meeting called to order at 1:30 p.m., with the following officers present: President, Vice-President and Treasurer.

The Secretary being absent, Mr. E. Calvert was chosen Secretary *pro tem.*

Reception of new members. Mr. C. D. Levering read an essay on Spring Dwindling, in which he brought out several good points. He prevented dwindling by having his colonies rear brood; inserting empty combs in the center of brood-chamber, and feeding to stimulate brood-rearing late in the Fall, and have his bees go into Winter quarters with plenty of young bees, claiming that young bees were not subject to Spring dwindling.

Mr. Kretchmer said he could prevent dwindling better by using sectional brood-chambers, keeping them on one section until strong enough, and as the season advanced, add another section.

Mr. Bittenbender stated that he could not get enough honey in one section of a brood-chamber to rear enough brood.

Mr. Kretchmer then said to add another section.

Mr. Bittenbender then stated his experience with the sectional brood-chamber. It could not be added to early in the Spring to advantage, his idea being that sectional brood-chamber hives would give too much room by adding a full section at a time, and his objection also was that it took too much space in the center of the hive, where the brood-nest generally is located. He would much perfer a single story hive in the management of Spring dwindling. He could then contract his hive to one or more combs by using dummies, and add combs as he found the temperature and queen demanded.

J. W. Bittenbender then read an essay entitled

Best Bee for this Country.

This is a very interesting subject, and one we are all more or less interested in. I speak from personal experience. I have handled Italians, German blacks, Cyprians, Syrians, Albino, and the Carniolans—all so-called different races of bees.

I do not know that I know more about bees than common folks, and if I was to say the best bee for myself, I would say a stingless bee, but the subject calls for the best bee for this country.

If I say the German black bee, you will call me a crank, and Kit Clover would never write on bee-culture again.

In some respects I say the Italians are best.

If I say the Cyprians, you may say, Dunder und blitzen! What bees for this country! If I say Syrians—what kind of bees are they? If I say the Albinos, you know it is not so. If I say the Carniolans, you will invest your money foolishly, and may call me a fool also.

I believe my subject calls for the best bee for the country. My experience is decidedly in favor of the Italian and German black bee. While every race of bees has more or less good qualities, we find more combined in these two races.

Italians are gentle, prolific, good honey gatherers, slow to rob, good comb builders, fair cappers, and excellent home protectors; while the German black bee is prolific, gentle, good honey gatherers, excellent cappers, less inclined to swarm, and easy to shake off the comb. While the Italians have found favor with bee-keepers, they have bred and petted them to about eight different colors, and perhaps if bee-keepers had taken the same care of the German bee that they do of the Italians, they would, perhaps, have a bee far superior to any.

Oh, what does common folks know about bees, anyhow?

Knoxville, Iowa.

The reading of the essay was followed by a lively discussion.

Mr. Kimble stated that he was surprised at Mr. B. saying the black bee was the best.

Mr. Secor said that Mr. B. did not exactly say that the black bee was the best.

Mr. Kimble then gave his experience with black bees, stating that he had kept black bees for eleven years, and could not make it pay. For eleven years he had kept Italians, and now always had plenty of honey to sell, and to make fine exhibits at fairs, and that his neighbors who had black bees were going out of the business, saying that bee-keeping did not pay.

Mr. Adams stated that he preferred the Italians.

Mr. Bittenbender said that he much preferred the black bee to cap honey, as they secreted wax faster and capped whiter, using more wax in capping the honey.

Another member stated that the black bee either raised the capping, or did not fill the cells so full as did the Italians, thus giving the capping a whiter appearance.

A member stated that Italians made as white wax as did the black bees.

"Bees and the Farm," an essay by W. M. Bomberger was called for, but that gentleman not being present, it was laid over for the next day's meeting.

"Is Bee-Keeping a Suitable Occupation for Women," an essay by Miss O. F. Jackson, was next on the programme, but the lady not being present, and subject not presented, it was stricken out.

Adjourned to meet next morning.

WEDNESDAY, SEPTEMBER 2, 1891.

Meeting called to order at 9:30 a.m., by the President.

Treasurer's report was received, stating that all expenses were paid, and that $12.55 remained in the treasury.

Next in order was the following essay by C. P. Dadant, but Mr. Dadant not being present, the essay was read by the President:

Prevention of Swarming.

Mr. President, Ladies and Gentlemen :

The subject of "Prevention of Swarming," is one of those which have tried the patience of bee-keepers for many years. The prevention of swarming in any case would be a very desirable attainment, but up to this date it has been found impossible to achieve anything towards this purpose when using small sized hives, especially when the production of comb-honey is desired.

There is, however, a method by which the production of natural swarms is almost entirely stopped, but in order to explain this method in an intelligible manner, it is necessary to state the main causes of natural swarming.

Swarming is a natural impulse which causes the bees of an overcrowded hive to separate and emigrate from their home, exactly as the first children of a large family leave home to seek their fortunes elsewhere. In a state of nature, a certain amount of swarming is necessary to make up for the colonies that become extinct by starvation, cold, accidents, or other causes. In domestication, with the modern inventions, artificial swarming, or the dividing of colonies, proves much more economical and safe. There is, therefore, no reason why the propensity of the bees to swarm should not be checked whenever desired.

An experimental practice of some 25 years on this subject, enables us to state that swarming may be prevented altogether with the following precautions:

1. The hive must be large enough to accommodate the most prolific queen. We may give our bees any amount of surplus room, but if the brood-chamber is so small that a good queen will be compelled to drop her eggs when mature, for want of cells to lay them in, the bees will at once understand that their hive is no longer adequate to their wants. The size of the brood-chamber is thus of the utmost importance, especially if the bee-keeper is using queen-excluders, which will compel the queen to remain in a certain apartment.

2. The upper stories, as well as the brood-chamber, must be large enough to accommodate the largest population, and they must also be easy of access, so that the bees may ventilate every part of them. Many bee-keepers do not realize the fact that it is at the expense of a great amount of exertion that the bees succeed in keeping the temperature down to blood-heat during the hot days of Summer. It is not to be wondered at, if bees desert their hives rather than carry honey up into a super which is connected with their main apartment by only a very small aperture, through which it is well-nigh impossible to send any fresh air, in spite of the indefatigable energy of the fanning workers, who take upon themselves the task of sending a current through the whole hive, and who keep at work night and day, for this purpose.

Another requisite for success in the prevention of natural swarming, is to have the supers on the hive in time, a little ahead of the crop; but if the bees find themselves crowded, were it but for a few hours, they will at once make preparations for swarming, and after they have contracted what is called the swarming fever, no amount of coaxing can appease them, and they will swarm, in spite of all the room that may be given them.

Again, to succeed in preventing natural swarming, it is necessary to remove the drone-comb in early Spring (or at least the excess of it), and replace it by worker-comb. A great number of those big, burly, noisy fellows is sure to annoy the bees enough to induce them to leave their home for more pleasant quarters, and in most cases where the first swarm is found to swarm again in a few days, it contains a great number of these drones, who have followed it by chance.

Some attention should also be paid to the location of the hive. If it is well shaded by trees or shrubs during the hot hours, or by an artificial shelter, if the hive is sufficiently open to give a good opportunity for ventilation, so that the bees may not be compelled to cluster on the outside, but on the contrary are able to stay inside and work at all times, and especially when the crop is good, and there is plenty for them to do; if, in short, all their needs are well looked after, there will be but little danger of swarming. In fact, the only cause of swarming outside of the causes mentioned above, is the rearing of a young queen to replace the old mother.

You are all aware of the fact that bees supersede their queens when old and worn out. It very often happens that the old queens begin to show signs of failing after the profuse laying of the Spring, and in the midst of a good harvest. It is then that the bees prepare a successor, being probably induced more readily to do this by the fullness of the harvest, and while the young queens are being reared it takes but a trifle to induce a swarm to issue with the old queen. Such a swarm is of but little value, as the old queen often fails soon after and leaves them queenless, or becomes a drone-layer.

The method which we have been following for a number of years, of producing only extracted-honey, and placing supers full of empty combs every season, on the hives, at the beginning of the harvest, has proven successful in nearly every instance, and we found that failures were nearly always caused by an unexpected large flow of honey, which took us unawares, so that we had not the time to give the bees sufficient room before they had made preparations for swarming.

It is more difficult to succeed in preventing swarms, when producing comb-honey, and for this reason I believe that a discussion among the members of this association upon that question will prove beneficial to many, and will bring forward new ideas.

The object of this essay was to introduce the subject, and I will be glad if it can cause the elucidation of some point of importance at this meeting, for there is not a more important subject than this in the study of bee-keeping.

Hamilton, Ills. C. P. DADANT.

Mr. Bittenbender thought large hives very good, but not a permanent cure.

Mr. Nysewander's experience proved to him that entrance guards were a good preventive of swarming.

Mr. Levering thought entrance guards too small, or in practice they will prove failures.

Mr. Kimble considered the extractor the best resort.

Another brother thought it best to let them swarm, and they would then be satisfied.

Mr. Secor gives room early in Spring, and thus prevents swarming to a great extent. If they swarm, he places a queen-excluder on his hives and the surplus receptacles, and sets the new swarm on the old stand, which is known as the Heddon system. Mr. Secor also thought that young queens tend largely to prevent swarming.

An essay by Maude Meredith was read, entitled

Lights and Shadows.

I am glad your committee gave me such an indefinite subject. It is so much better for the subject. Besides, coming as it does, at the close of such a feast of good and valuable things, it may pass as a sort of desert—a whipped-up trifle of nothingness, that serves only to keep us dallying at the table for yet a little longer time.

I suppose, in bee-keeping as in anything else, the lights and shades will seem to fall in different ways to different people, so I may be obliged to make a personal matter of it, and tell only how they strike me.

To begin where the bee does, at the beginning of the season. When we get our hives all nicely out on the summer stands, and the warm sunshine drops over them and whispers to the bees of swelling buds in the maples' crown, and fragrant tassels in the willow fringes along the river's winding ways; when we hear again the cheery hum of the little fellows, glad to be let out from their long Winter prison, then we fold our hands, having nothing else to do, and decide that bee-keeping is the most delightful occupation in the world, and we actually wish we had a thousand mere colonies of bees.

Then we go into the house and bring out a pint of rye flour, and put it in shallow boxes on the sunny side of the hives.

By and by, we go out again to look at our bees, and find great colonies of workers of every kind, and color, and previous condition of servitude, buzzing and roaring above those boxes, waiting their turn, as it were, for a dip into that flour.

Meantime, such a fanning of wings has blown the flour into a great white circle all around the boxes. This is jolly. You never saw happier or more eager bees, and as for good nature, why an everyday, common house fly is not a circumstance.

By and by your neighbors come and ask why you were throwing flour on their bees' backs, and you, in return, ask them why they allow all their scrub stock to steal into your private preserves, and carry off half the rye flour you had set out for your own colonies.

Then, come on the days of fruit bloom, when your own orchards—and those of your neighbors—are like feathery drifts of snow, touched and tipped with the rosy fingers of the dawn, and every little wayside plum tree is a poem in white.

How you have watched the bursting bloom, how solicitous you have been lest rains come up, or cold winds blow, and when Old Probabilities does give you just the warm, sunny days that you want, how the joyous hum of the bees fills the air, and the honey the empty cells.

If the bees were well fed early in the season—and I believe just as much in feeding bees as in feeding cows—there will soon be hives overflowing with both honey and young bees. You go out, now in the soft sunshine, putting on surplus cases, opening up the entrances, and dilly-dallying generally around among those bee-hives.

This is delightful. This is the sunny side, surely, and we may safely set this down as one of the "lights" of bee-keeping. The bees are very happy, and so are you.

The next morning, about 10 o'clock, you hear a roar, and dropping everything else, you sort of work over toward that sound. Yes, just as you expected, there is a swarm out.

Now, if you are like me, you have your queen's wing clipped, so all you have to do, is to take your old hive away, substitute another, head the queen into it, and there you are, smiling, cool, serene, and happy in another colony of bees. This, to me, is one of the decided "lights"—high-lights, in fact—of the business.

But, here is the companion picture: About eight days later you hear another roar, and rush out to find the second swarm coming out of that same hive. You watch them, and perhaps you throw some water up among them, which does not seem to bother them any, and they keep on criss-crossing each other, weaving a web in diamond pattern big enough to cover a farm, so it seems to you as you stand gazing up through it, and then slowly they begin to settle—on the very highest branch of the tallest tree in the yard.

You get a ladder, and after infinite pains and puffing, find it does not go more than a fourth of the way up to the cluster, which is growing larger and larger every moment.

There is the hive waiting for the swarm; there is the swarm at the top of the tree; and there you are at the bottom. What are you going to do about it? This, to me, is one of the shadows—dense, impenetrable—for the swarm always goes off and leaves me standing there alone.

But this very subject of clipping the queens' wings, oh, I know just which authority does, and which does not agree with me—oh, I mean, disagree, principally, with me—but yet, in spite of it all, I will clip the wing. You have all heard of the boy who had got to get the ground-hog, whether there was or was not one in the hole. Well, clipping the wing is a sort of a ground-hog case with me.

If you cannot climb trees, you must see that your queen is equally disabled, or lose your swarms. And this same clipping business has its lights and shadows also.

On a sunny morning, while honey from fruit bloom is coming in freely, if you open your hive, lift frame after frame, and having found your queen, ask your assistant to hold the frame while you pick off the queen and snip her wing, and, replacing the frame, close your hive with a swelling sense of satisfaction, then you have seen the sunny side of wing clipping.

If, however, you wait just a day too late, until the uproarous bees, intoxicated with the flow of honey that has set them wild for the last few days, but has now ceased, are out on regular foraging parties, ready to waylay and rob every one or any one, and you then get your hive open, your frame containing your queen out, and being alone, you begin to chase from side to side of that frame after the most lively queen you ever happened to see, and suddenly, as you notice that the thermometer must be 96° in the shade, while it is, at least, 110° under the bee-veil, just then you hear the shrill buzz of a pioneer robber, as he hovers an instant above your head, and just as you think you are ready to snip that wing, all the colony below you hear the same robber cry, and are up in arms instantly.

You are sure this colony will swarm to-morrow if you do not catch that queen, and you are equally as sure that you will wish they had swarmed a year ago if you do not get out of this right quick, and there you are. This is the shady side of that part of the work.

Later on, when the lindens swing their creamy tassels, and the great trees are filled with that peculiar happy hum of bees that are gathering ligitimate stores of sweets—for even a bee does not sing in a happy strain when robbing others—and when all the pastures are white with fragrant clover bloom, then we place a hive upon our scales, and feel that peculiar glow of exultation that we all understand, but could not explain in words, when we see the weight coming slowly and steadily down, and realize that it is being thus lowered by pure, clear stores of the sweetest of all sweets—honey.

This is, perhaps, the bravest light of them all. For much as we may love bees for themselves, for their wonderful intelligence, their thrift and tidiness, it must be admitted that it is human nature to smile most serenely when the hard cash, or its equivalent, is coming rapidly in.

Later still, when we begin to take off this luscious store, then you—if your apiary is situated as mine is, in the sunniest part of the garden—cannot possibly connect the word "shadow" with this part of the work, except in a very figurative sense. But in this sense it comes out strong.

We always manage to have honey to take off after the flow is over, and this is the time that robbers abound, and of all disagreeable things I hold the hum of a robber bee the worst. I have a very vivid remembrance of this sound. I have had experience with it, and it happened in this wise:

I had occasion to hold two or three frames of honey for a few days, so I hung them in an upper story, and set them on the side-table in the kitchen. A few days later, my girl came in to say that there were two or three bees on the kitchen window.

Now, I knew I ought to go and attend to that honey, but I was writing something—probably an article on the proper care of honey—and did not want to stop; besides, the bees had been having such fine pasturage, that I did not really think it could be quite gone. So I kept writing.

An hour or two later the girl went back to the kitchen again. I heard a wild shriek, and rushed after her. She was in the dining-room nursing a sting, but motioned me toward the kitchen. I opened the door.

Words fail me! That room was like a hive. All the swarms that ever issued never filled the air as completely full, and fresh train loads arriving every second. At first, I rushed in with some vague idea that I could "shoo" them out, but they convinced me to the contrary, and I ducked and dodged back, and stopped to poke about a dozen out of my frizzes. Then, I put on my regular regimentals, went bravely outside, closed the door and shutters, and tried to smoke them out. It did not work, for they came in faster than they went out.

At last, driven to desperation, I caught up the roaring hive, and actually carried it down cellar. I shall never forget the horrible roar, and I never want to hug up as much noise and viciousness again and hold it so, while I descend into a dark cellar. I did not get a sting, but I got experience.

In removing section crates from hives, I find one of my dark shadows. With the average hive I can combine a chisel and muscular force, and, as the dead beat says, "make a raise" of the fullest crate.

But I have some of Mr. Hilton's double-walled hives, and I hope he is here to hear me say I do think them the prettiest hive in the world—but when it comes to the matter of lifting off the crates, I fail to see how any man living does it. Here a chisel cannot be used. In fact, I hardly know what can. About the only thing I ever noticed any man who helps me use, in this place, was bad words, and they did not seem to lift a bit.

Now, according to my notion, if some bee-keeper will invent some argument by which bees can be convinced, as fully as I am, of the folly displayed in so pasting the surplus honey crates down onto the hive, he will throw a great and needed light onto this very dark and sticky part of the pleasure of bee-keeping.

Every good housewife knows, though usually she is not a bee-keeper, that more than all the pride she takes in her rows of well filled fruit cans, her glasses of ruby jelly, and her jars of luscious preserves, and snappy pickles, is the pride she feels when she sees her store of Winter goodies augmented by crates of well filled sections, white with the very bloom and fragrance of the clover fields, and sweet with all the suns of the passing Summer. This is the sunny side.

The shady side. Odd is it not, that no real lover of bees is ever willing to make any remarks under this head? And as I am a bee-lover, I believe I will follow so worthy an example set by others. I will not speak of the barren honey seasons, the diseases that trouble the bee-keeper, nor the disposition on the part of irate bees to, at times, risk their very lives simply for the gratification of their tempers. Into this last we can all of us enter with sympathetic fellowship. How often do we take the same risks with very similar results.

I can so thoroughly understand the bee's feeling at such times as not even to blame her when she hits me. But I would like to know of some efficacious remedy to apply—after I have brushed the sting off. However, this is verging too near to a tender portion of our subject—that part of it, in fact, where silence is golden.

But taken all in all, there is much sunshine and little shade. Much real enjoyment and few stings; many lessons of thrift and promptness, for no laggard ever made a success at bee-keeping, and few disappointments, in this round of the honey-bee's year.

When from Winter's icy spell
Burst the brooklets in the dell,
With a song;
When the early robins call
From the sunny garden wall,
All day long;
When the maple buds awaken,
And the willow's fringe is shaken,
To the daffodils;
When the dandelions bright
Dot, with disks of golden light,
All the hills;
When the Spring has kissed the world again,
And the apple blossoms whiten,
And the grasses gleam and brighten,
Then we listen to the music
Of the honey-bee's refrain.

When the lilies, snowy white,
Gleam upon the lakelet bright,
'Mid their leaves;
When the twittering swallows fly,
Building nests so safe and high,
'Neath the eaves;
When the clover lifts its face,
And the linden's dainty grace,
Passes by;
And the heart's-ease blushes red,
When her bold bee-lover fled,
With a sigh;
When Summer decks the mountain and the plain,
When she binds her golden sheaves,
When dust-laden droop her leaves,
Then we gather in the honey
While the noisy bees complain.

When the maple forests redden,
And the sweet ferns brown and deaden,
On the lea;
Straightly furrowed lie the acres,
And we hear the roar of breakers,
Out at sea;
When the birds their columns muster,
And the purple frost-grapes cluster
On the vine;
And the Autumn winds are sighing,
Springtime dead, and Summer lying
Here supine;
When the dreary winds are filled with sounds of pain,
When the crickets shrill are calling,
When the golden leaves are falling
Then our busy workers slumber
Till the Springtime comes again.

MAUDE MEREDITH.

Dubuque, Iowa.

The question-box was then opened.

Question—Why is it that honey-dew is sometimes called bug-juice?

Mr. Smith says, because that is what it is.

One member was positive honey-dew was sometimes present when no aphides could be found by microscopic examination.

Time being limited, the question-box was closed, and the regular programme taken up, next in order being the

President's Address.

Ladies and Gentlemen:

This Society was organized in the Fall of 1883, on the old Fair Grounds, west of this city.

The Rev. O. Clute, author of that charming book, "Blessed Bees," and now President of the Agricultural College of Michigan, was its first President. He, and such honored names as O. O. Poppleton and Dr. Oren gave it a character which we hope may continue with it during its corporate existence. If it has not been a success since those worthy men ceased to labor for it, it is because the bee-keepers of Iowa have not taken the interest in it which they should have done. No society can do the work expected of it, and for which it was organized, without the active co-operation of those who are interested in the pursuit which it seeks to foster.

We are often appealed to as a society for assistance to advance some measure thought to be of interest to us all as bee-keepers. Few people seem to realize the fact that an association, in order to wield a large influence, must be united in its aims, and the larger its membership, and the larger the constituency represented, the larger will be the influence exerted.

I make these remarks to convince you of the importance of a larger membership and united action.

How many bee-keepers have we in Iowa? It is impossible to say; but no one, I think, will deny that there are thousands. These thousands, as well as thousands of others who are interested in the product of the apiary, or in the bee as a valuable friend to agriculture and horticulture, need educating.

Bee-keepers need educating along the line of uniformity of package and price. They need to know the magnitude of the industry which they represent. They need to know when, and where, and how to sell their product. They need to know honey-dew from the product of white clover, and the dangers to the business from putting it on the market. In short, they need educating along all lines in order to make the industry of bee-keeping respectable and respected.

Until all bee-keepers know how to utilize to the very best advantage the product of their field; until they know worthless patented clap-traps from valuable essentials in the apiary, and until we are able to extract from nature's laboratories, with the least labor and greatest profit to ourselves, the sweets now wasted, the mission of these societies is not accomplished. And until the people are educated to know that bees are friends, and not enemies; that they aid in fructifying the labors of the agriculturist, horticulturist, and market gardener; until they know that honey cannot be made by the groceryman, nor comb-honey by machinery, our work is not ended.

I, therefore, exhort you to renewed interest and devotion to the only society in Iowa which has for its object the protection and culture of insects friendly to man, and the utilization of a natural product which enriches no man unless gathered.

I have not at hand the Eleventh Census Report, but in the one published in 1880, the product of honey for the year 1879, in the United States, was given at 25,743,208 pounds, and of wax 1,105,689 pounds, aggregating nearly four and one-fourth millions of dollars' worth of product. I think the year 1879 was not a good one for the bee-keeper in many parts of the country. I expect to see a much better report for the year 1889.

Regarding this report, I quote from the Annual Report of the Secretary of Agriculture for the year 1889. J. R. Dodge, Statistician, under the head of bee-keeping, says: "Among the minor branches of rural industry, bee-keeping is one of the most important, though its prominence is not generally recognized, from the fact that it is almost everywhere carried on as an incident of general agriculture, and but rarely as a leading rural occupation. Every State and territory reports bees and more or less honey, usually a hive or a few colonies for each farmer, rather than extensive apiaries and large production.

"In some localities, as in portions of New York, Ohio, Tennessee and California, where existing conditions are particularly favorable, apiculture is more prominent, dominating other industries, perhaps, in a neighborhood, though very rarely the leading branch of agriculture over any considerable area. The value of the annual product of honey and wax is not generally realized; they are produced more or less extensively in every section of the country, and the aggregate value is large—much larger than that of other crops of which more notice is usually taken. It almost equals the value of the rice or the hop crop, falls but little short of the buckwheat product, exceeds the value of our cane molasses, and of both maple syrup and sugar. It largely exceeds the value of all our vegetable fibers excepting cotton, and in 1879 was half as large as the wine product of the year."

The time is drawing near when the appropriations will be made to represent our State at the World's Columbian Exhibition. The different State societies will undoubtedly present their claims to the proper authorities, that the industries which they represent may not be forgotten or neglected.

I recommend the appointment of a standing committee to meet the Iowa Columbian Commission, or such other committee or body as shall have a voice in distributing among the organized industries of the State, the appropriation which shall be made by the next General Assembly.

Whether it will be wisest to confine our bee and honey show to the building to be erected by the State, or to exhibit all apiarian products and appliances from all the States in one of the Government buildings, thus bringing together in one grand exhibit, the honey producing possibilities of our country, I am not fully convinced, but in either case we ought to have the means provided, and the services of an expert to collect and arrange the exhibit from this State. I trust you will heartily co-operate in this needed action.

This country has made rapid strides in art, in invention, and in material prosperity in the last hundred years. As we measure off one cycle of apiarian progress, the opportunity is presented to us to exhibit to the world what American genius and energy has accomplished in the field of apiculture. Great has been our improvement in many fields, in none has there been greater progress than in the industry which we here represent.

Go back 100 years, and note the condition of apiculture. The science was unknown. It had scarcely any literature outside of the poetry of Virgil, which, though written before the birth of our Savior, was barren of any benefits to bee-keeping. The bee-hive was an unsolved riddle. Its mysterious inmates, from which the people endeavored to filch a portion of God's bountiful gifts by "killing the goose that laid the golden egg," were objects of superstitous reverence. Poetic attributes and superhuman wisdom were ascribed to them. The profoundest ignorance as to their habits and capabilities was common among the people. It is safe to say that more positive and practical knowledge regarding bees has been brought to light in the last 100 years than was ever known before, unless bee-keeping, like some other industries, had become a lost art during some of the revolutionary struggles of former times.

Since Huber published his observations on the habits of the honey-bee in 1792, and since Langstroth, by his invention of the movable-comb, made the hive an open book, practical and scientific apiculture has made giant strides forward.

A hundred years ago the honey of commerce was insignificant in amount compared with that of to-day. Our apiarian appliances are as far ahead of those used by bee-keepers then as the self-binder is better than the old sickle, or the electric car is ahead of going afoot, while in the matter of breeding, and the introduction of foreign races through the daily mails, we are familiar with what would have been a marvel in Huber's time.

American invention in apiarian implements is leading the world. This progress is what the bee-keepers of the United States must show at the Columbian Exhibition. Iowa should do her part toward making it a success.

Perhaps some of you know that the North American Bee-Keepers' Association have prepared silver medals to present to every society which becomes affiliated therewith, by the annual payment of $5. Two of these medals will be given to each society. They are expected to be used as premiums for the finest displays of comb and extracted-honey. I recommend that this society take the necessary steps to continue its affiliation. The stimulus to competition which these medals will give to next year's exhibit at the State Fair, ought to bring out a fine display. They can be offered by this society in addition to the premiums offered by the agricultural society, under such rules and restrictions as you may think best. Some action will be necessary before another meeting.

Before closing, allow me to congratulate you on the improved appearance of our exhibit this year.

Enlarged space and better accommodations have been provided for the Iowa bee-keepers. This only corroborates what I said before, regarding the power of organized and persistent effort. The added facilities were granted at the request of your committee. I have found everybody connected with our department anxious to grant all reasonable requests.

Whoever would take a place in the front rank of bee-keepers of to-day must understand that the road to success lies not through the sunny plains of indolence, but rather over the rugged hill country of constant endeavor. Mental and physical activity are as necessary as in any other occupation. The one who thinks that bees work for nothing and board themselves, had better buy his honey. The bee-hive is not like the sugar maple—to be tapped once a year.

One who has not the ability to plan, the energy to execute, and the patience to carry out details, will never succeed in this business. But to one who loves study and work, and who has a genius for doing the right thing at the right time, whether tempted by the alluring sweets or not, there is pleasure and reasonable profit to be extracted from this branch of rural economy.

EUGENE SECOR.

Forest City, Iowa.

The convention then adjourned to meet at 1:30 p.m.

AFTERNOON SESSION.

The meeting was called to order at 1:30 p.m., by the President.

"Some Problems in Apiculture," was the subject of a short but very interesting speech by Prof. Herbert Osborn, giving his views on bee-forage, and also how we could much improve our bees, if so located as to produce a cross on such bees as we desire, and stating that it would be a very good idea to have some young men instructed to make experiments.

The question was then presented: "Could an enterprising man make a livelihood by keeping bees alone?"

Mr. Adams gave his views on the matter, saying that if he was a man who could make a livelihood at other occupations, he could at bee-keeping, but it required a man that could keep at the top of the ladder in everything he undertook.

Mr. W. M. Bomberger read his essay on

Bees and the Farm.

In an introductory way it might be well, if we had the time, to glance at the sentimental side of the relation between the home and the honey-bee, but I will omit it for more important matters. It is too often the case that this side of important questions are left in the background. It would be folly for me to ask any one here if they would keep house without a few colonies of bees on the lawn, or near the kitchen-door.

It is not only a fact that thrift, industry and ingenuity are characteristic traits of the inmates of the hive, but the presence of the homes of our busy little friends near our habitations imparts to us these elements in manhood or womanhood.

You never saw a lazy or stupid person succeed with bees. The bee-fever may sometimes get into the system of a lazy man, but after the first serious attack it leaves him in a seven-fold worse state. The successful bee-keeper is an industrious person, a mechanic, a botanist, a producer, a good salesman, and rarely a scamp. He gets these traits from the hive. He can even get his religion from it.

We are in times now that plainly show that industrial conditions are going through a most radical change, and the farmer, his methods, and his farm, are going rapidly in the same direction. The old farm routine will be a thing of the past—if it is not the farmer sees plainly that his ownership will be. We find, in looking around that the hive is being placed on nearly every farm. The question then comes up, is every person going into the bee-business? And the more serious question follows, what are specialists and bee-keepers going to do if a well-regulated home apiary is placed on all of the best conducted farms, and bees become as common as poultry?

Let us look beyond ourselves and see what the bee will bring with it, as it finds its place on nearly every farm. It will make farms more home-like, and cement home ties. It will throw another gleam of light across the hard beaten path of drudgery, it will give fireside entertainment, it will place one of the rarest delicacies on the farm table to take the place of that glucose article that should find no other place than in Willie Watson's soup for his Doddies.

We are aware of the fact that the extensive popularity of the honey-bee is, from his standpoint, viewed with alarm by the specialist. And it is alarming to him to see his favorite pursuit thrown into the hands of so many, and in so short a time. I am of the opinion that no specialist or bee-keeper need be alarmed —it will only be a blessing to the farmers, and eventually be a boon to bee-keepers.

It never hurts a business or pursuit or commodity to popularize it. Popularizing a commodity can, but does not, always lead to overproduction. If honey is popularized in the same ratio as there is an increase in bee-keeping, the consumption will be greater, and there will be in no measure enough of the product for the demand, unless it may be a chance year now and then.

But if this is the case, the product is of such a character as will admit of its being kept for a long while. A honey crop is as uncertain as a potato crop, but in years of plenty and overproduction, it is as good as old wheat, and is as safe as that old staple to get money advanced on. Another objection is, that these cheap producers will bear down the market by trading out their cheap honey at the stores, and this will destroy the honey market.

This is not so formidable as it might seem on the surface. Cheap honey means large consumption, and when the price gets very low, it is bartered between farmers at a low price and the low prevailing price in the markets has popularized the product, and if the specialist has had wisdom enough to hold back his crop, he can then get a good price for a good article. If the appetite has been sharpened by a poor article, the public will give a good price for a good article rather than do without it. I have made a study of this market question in the sale of fruits, and know well how it works, and the question of overproduction is a more serious one in horticultural products than in your line of work.

In one town of less than 2,000 inhabitants, six years ago, we found less than 30 bushels of small fruits, and the present season the amount consumed was over 400 bushels. This does not include the grapes, of which there will be between 8 and 10 tons consumed, if the prevailing price is 2½ to 3 cents per pound. The consumption was less than a half ton 6 years ago.

This increase has occurred in the face of a decreasing population. The growers find that the extensive use of fruit in towns is popularizing it in the country, and that a rapidly increasing country trade requires more extensive planting. It will be just so in the future in the production of honey, and when farmers keep bees, and it becomes general for the consumption to be from 100 to 1,000 pounds of honey per family, there will be as great, if not a greater, demand for honey, than there is now.

So, if in looking around for a diversity in their farm work, they conclude to take up the smoker and put on the veil, we think there is no reason for alarm. The farmer owns the pasture, and he certainly has the first right to fill it with occupants. If the agriculturist is tired of the sorghum field, and an inferior sweet, and concludes that he will quit lugging heavy cane and skimming the molasses pan, and takes up the veil and smoker, he is going to sow forage crops for the new kind of stock he places on his premises, and this will result in a better bee-pasturage, which will be a big advantage to the specialist. So the specialist, with superior knowledge and defter skill, will have the advantage, and we think that if viewed in the proper light, it will be an advantage to everybody in any way connected with apiculture to have bees occupy the same place on the farms as poultry does now. W. M. Bomberger.

Messrs. Eugene Secor and E. Kretchmer were appointed as a committee to confer with the Legislature, asking for an appropriation to pay the preliminary expenses of an exhibit of bees and honey at the World's Fair at Chicago, in 1893.

The following officers were elected for the ensuing year:

President, Eugene Secor, Forest City, Iowa.

Vice-President, C. D. Levering, Wiota, Iowa.

Secretary, J. W. Bittenbender, Knoxville, Iowa.

Treasurer, Joseph Nysewander, Des Moines, Iowa.

Knoxville, Iowa.

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The Great Interest which is felt in sea-coast defense gives a peculiar timeliness to the illustrations of great guns at Sandy Hook, contained in *Frank Leslie's Illustrated Newspaper.*

Preserving Empty Combs.

WM. CAMM.

Among the earliest books on bee-keeping that fell into my hands was Quinby's Mysteries. The author gave one but little hope of saving empty combs from the wax-moth by enclosing them in tight receptacles. Indeed, I think the writer said he had sealed up comb in air-tight vessels, and yet had them infested with moth. The impression left upon my mind was that the price of spare comb was like the price of liberty, eternal vigilance. For years I sulphured my spare combs occasionally, and hung them where the air was so free about them that, except in hot weather, it could not rise in temperature to the hatching point; so that any eggs laid upon them remained inert.

In 1887 I had combs remain without any swarms upon them, and as I was looking for a new location, and was expecting to break up my apiary, I left them in empty hives, merely seeing that the entrances were well closed. The next year was a worse one; and I moved to where I had no honey-house or any conveniences for bee-keeping. More bees had died during the Winter, and they continued to starve out during the Summer of 1888.

The prospect was so bad on account of drouth that Spring, that I paid little attention to my empty combs until the rains set in about the middle of May. I supposed from the little I had accidentally seen that my combs were all destroyed, but when I came to overhauling my hives, to have them ready for swarms, what was my surprise to find comb in hives, two stories high, that had been tenantless for two years, quite intact, and with the exception of some mold, ready for bees to put honey in. Fully half my combs, kept in this careless, slip-shod manner were so little damaged by moth and mold, that bees filled them up in a day or two after they were put upon them.

Many hives were telescopes, and (for some reason that I cannot satisfactorily explain) most of the combs in these hives were wholly destroyed by moth, or so moldy that bees cut them out, but in some permanent double-walled hives two stories high, they were as nicely preserved as one could wish. The single-walled hives did the best, though no better made or cared for than the others. Some of the telescope hives, that had the entrance in the cap only fastened up, had the half-inch space about the brood-chamber so full of cocoons that the hives were with difficulty gotten out of the caps, and presented a scarred and sorry sight. Of course, combs from the extractor, that had been put away with honey on them, were all right, and the ants had gotten into only one or two hives.

My hives are well made; better, perhaps, than the average, and after careful examination I am at a loss to account for the preservation of the combs in some, and their loss in others, all equally tight. In one hive containing 20 combs, I found a colony of large black ants, but no moths. Here the combs were smeared with honey, from the extractor, two years before when put away. Wherever the hive had been cracked or shifted accidentally on the stand, so as to leave an opening large enough to permit the entrance of moths, the combs were destroyed, unless it was one that contained no pollen, and had not been bred in.

I have exposed such combs, in sections, for years without having them damaged, and should not expect any trouble in keeping such; but in a large apiary there are but few such combs used in frames. I use the same above that I do below, because I find it best in the Spring to transfer all drone-combs, or combs that are too largely drone-celled, to the upper story for store comb, and most of these are either bred in before they are lifted, or the queen goes up and lays in them after they are lifted.

Except there is a very late honey-flow, too, most of the upper-story combs are put back on the hives till time to remove supers for Winter, and are not covered with honey as a protection from either moth or mold, till the time comes to use them again.

Here, let it be noticed in passing, is an argument in favor of tiering up for extracted-honey, that is of using frames of half the depth of those in the brood-chamber, and as soon as one is filled, without waiting for it to be sealed, put another super, filled with half frames, underneath the first, and so on until the season is closed, as advised by Dadant's revision of Langstroth. You are not only clear of brood, but you can get out of a set of half-frames, two-thirds as much honey as you could out of a set of full ones; you can handle them easier, and faster; they do not melt down so readily, nor the combs break in extracting; while, the season being closed, you put your combs away from the extractor, guarded with honey, till needed again, and then, being covered with sweets, they are very attractive to the bees.

Has any one tried putting empty combs away in a light trough, or box, painted with coal tar?—*Bee-Keepers' Guide.*

Southern Calif. Bee-Keepers' Association.

GEO. W. BRODBECK, SEC.

To the Bee-Keepers of California:

The Southern California Bee-Keepers' Association will hold their Second Annual session at Los Angeles, in the W. C. T. U. Hall, on Wednesday, Oct. 21, at 9 a.m.

This association has been in existence one year, and has met with such marked success that at present its membership outnumbers some of the Eastern State associations that have been organized for years. The object in forming this association was for "mutual benefit and protection," and with this aim in view, we desire to enlist every one in the State of California "who owns and handles bees."

The success of this organization proves beyond question that the bee-keepers of the State begin to realize the necessity of building up and fostering the honey industry of California.

During the past few years this interest has seemingly been dormant, and as a result, while other industries have prospered, and by banding together have secured the law's protection by proper legislation, we, as a class, have secured nothing. California is the largest honey producing State in the Union, consequently ought to rank first in everything that tends to aid and build it up. Every industry in the State is making a determined effort to secure proper recognition at the World's Fair, and to accomplish this are doing their utmost to secure their portion of the State's and counties' appropriations, and it is high time we were doing likewise.

California's apicultural display at the World's Fair in 1893, will depend entirely on the concerted action of the bee-keepers of the whole State, and this will never prove a success unless we are represented by a State association. There is a proposition now before this association to convert it into a State association, so if you possess any pride in the bee-keepers' industry, or consider your own interests, the necessity of a strong and permanent organization cannot be questioned.

We suggest to every county and local bee-keepers' association in the State to send at least one individual to represent their interests at this October meeting. We extend a most earnest invitation to every bee-keeper in the State, both male and female, and have made provisions for the largest assemblage ever held on this coast.

There will be "Ramblers" from all sections: invite your friends to join with you, and if possible inform us of those who will be present.

223 S. Spring St., Los Angeles, Calif.

Toronto Industrial Exhibition.

R. F. HOLTERMANN.

The honey exhibit at Toronto this year is not entirely unlike that of former years. The quality is probably about the same as that of last year, the number of exhibitors one less.

As to quality, that of the extracted-honey is hardly up to the standard of former years, several exhibits having a slight touch of that in their honey which would debar it from being called strictly first-class. There are only two which show honey having an appreciable quantity of linden honey in it.

The comb-honey is decidedly not as well filled as formerly, showing a honey-flow which has almost become old-fashioned, we having had four poor seasons in succession.

As to the style of exhibit, there appears to be a tendency to set comb-honey crates on their ends, instead of on their bottoms. This innovation is probably owing to a movement in that direction by Mr. Hall, of Woodstock.

There is also a very decided tendency to forsake shelves for exhibiting extracted-honey, and making pyramids of honey in glass, with glass or light boards between each story, as the pyramid is built. Your humble servant first introduced that system, having in turn copied it from W. Z. Hutchinson, at the Detroit Fair.

I think the largest prize winners are in order as follows: E. L. Goold & Co., R. H. Smith, Geo. Laing, J. B. Hall, and William Goodger. A good deal of taste has been displayed, and we all concede that Mr. Smith fairly and squarely won the first prize for the neatest and most attractive exhibit. In fact, the judges appear to have done their work so well that there has come to my ears not one word of complaint. This reflects credit not only on the judges, but on the exhibitors.

For the latest and best invention, E. L. Goold & Co. take first prize. They exhibit a 2 and 4-frame honey extractor; the combs all reversible. The advantage over the Stanley, it is claimed, being no loose bottom hinge, each basket must reverse, it takes a small can, and the entire machine is much less expensive. Second prize Mr. Leach takes on the foundation and section folder already described in the BEE JOURNAL. Third prize was awarded to the Porter bee-escape, shown by Mr. Hall.

PRIZE LIST.

Best display of 200 pounds of extracted granulated honey, in glass—First prize, R. H. Smith, Bracebridge; second, E. L. Goold & Co., Brantford; third, J. B. Hall, Woodstock.

Best display of 500 pounds of liquid extracted-honey, of which not less than 250 pounds must be in glass, quality to be considered—First, Geo. Laing; second, E. L. Goold & Co.; third, J. B. Hall.

Best display of 500 pounds of comb-honey in sections, quality to be considered—First, J. B. Hall; second, George Laing; third, E. L. Goold & Co.

Best display of 20 pounds of comb-honey in sections, quality to be considered, that is to say, clean sections and best filled—First, J. B. Hall; second, Geo. Laing; third, R. H. Smith; fourth, Wm. Goodger, Woodstock.

Best display of 100 pounds of extracted liquid linden honey, in glass, quality to be considered—First, George Laing; second, E. L. Goold & Co.

Best display of 100 pounds of extracted liquid clover honey, in glass, quality to be considered—First, R. H. Smith; second, E. L. Goold & Co.; third, Geo. Laing.

Best beeswax, not less than 10 pounds—First, Geo. Laing; second, R. F. Holtermann; third, R. H. Smith.

Best foundation for brood-chamber—First, E. L. Goold & Co.

Best foundation for sections—First, E. L. Goold & Co.

Best apiarian supplies—E. L. Goold & Co.

Style and assortment of glass for retailing extracted-honey—First, R. H. Smith; second, E. L. Goold & Co.

Section super for top-story and system of manipulating, product to be exhibited in super as left by the bees—First, E. L. Goold & Co.; second, J. B. Hall; third, Geo. Laing.

Best and most practical new invention for the apiarist, never shown before at this exhibition—First, E. L. Goold & Co.; second, W. O. Leach; third, J. B. Hall.

Largest and best variety of uses to which honey may be put in goods—First, R. H. Smith; second, Geo. Laing.

For the most tasty and neatly arranged exhibit of honey in the apiarian department, all the honey to be the production of the exhibitor. Twenty-five dollars of this prize is given by the Ontario Bee-Keepers' Association—First, R. H. Smith; second, J. B. Hall; third, E. L. Goold & Co.

To the exhibitor taking the largest number of first prizes for honey at this exhibition, 1891—First, R. H. Smith; second, Geo. Laing and J. B. Hall.

The judges, Messrs. C. W. Post, Murray, Ont.; J. B. Aches, Poplar Hill; and Murray, of Owen Sound, appear to have given very general satisfaction, and went about their business in a way to convince the exhibitors that they intended to do their duty without fear or favor.

Not Luck or Chance, but Science.

THOMAS KELLEY.

Being puzzled in the management of my bees, I went to see Mr. Geo. E. Hilton, on July 13, related my troubles, and I shall never forget his interesting conversation, practically illustrated by hives, surplus cases, and general manipulations.

If you are a beginner in bee-culture it will pay you to go 100 miles or more to visit Mr. Hilton, and you will be convinced, as I was, that he has no secrets, but that his experience of 14 years is a gift to the seeker for information.

I now have $50 or $60 worth of the finest comb-honey I ever saw, having taken within six weeks from a single hive 112 finished sections, or about 100 pounds.

Mr. Hilton came to see me on July 30, and said I was getting the honey from what he called "Willow Herb." He proved to me that bee-keeping is no longer luck and chance, but a science.—*Michigan Farmer*.

Bee Journal Posters, printed in two colors, will be sent free upon application. They may be used to advantage at Fairs over Bee and Honey Exhibits. Samples sent free. Write a week before the Fair where to send them.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Oct. 7, 8.—Missouri State, at Sedalia, Mo.
J. W. Rouse, Sec., Mexico, Mo.

Oct. 10.—Capital, at Springfield, Ills.
C. E. Yocom, Sec., Sherman, Ills.

Oct. 14, 15.—S. W. Wisconsin, at Fennimore, Wis.
Benj. E. Rice, Sec., Boscobel, Wis.

Nov. 19, 20.—Northwestern, at Chicago, Ills.
W. Z. Hutchinson, Sec., Flint, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—P. H. Elwood....Starkville, N. Y
SECRETARY—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

Bee and Honey Gossip.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Nice, White Honey.

We are keeping bees, although we hardly make a mark yet. We have 51 colonies in chaff hives, which have not stored a particle of dark honey this year—and not much white honey, either, but what we did get is in 1-pound sections, and as nice as was ever stored in honey-comb.

A. O. HOLLIWELL & Co.
Sears, Mich.

Contradictory but Not Spiteful.

On page 376 Mr. E. L. Pratt alleges that I have searched to "pick up little contradictory points, of no special importance, and fling them at him in a spiteful way." Thus Mr. P. confesses to "contradictory points," but he fails to give evidence of spite. To allege spite unaccompanied with evidence is beneath the dignity of any honorable person. I challenge Mr. Pratt to quote, or to refer to anything I have written that can, by an impartial reader, be construed as aiming "spitefully at" him. He would not have *his* "contradictory points" mentioned, so he spitefully" resents any allusion to them.

Richford, N. Y. C. J. ROBINSON.

Good Fall Crop of Honey.

We are having a large yield of Fall honey in this part of Nebraska. I shall average from 50 to 75 pounds to the colony. It is of excellent quality.

W. H. CAGIL.

Central City, Nebr., Sept. 18, 1891.

Drone and Worker-Cells.

Under the title of "Bees and their Products," on page 371, Mr. Chalmer says there are 16 drone-cells to the square inch, and 25 worker-cells. Now, if the cells were square, instead of hexagonal, he would have been correct. The area of a drone-cell, in inches, is 1/32 of the square root of 3, and of a worker-cell 1/50 of the square root of 3; therefore, a square inch of drone-comb (both sides) contains 36.9 cells, and of worker-comb, 57.7 cells, or in 1,000 square inches of drone-comb there are 36,950 cells, and of worker-comb, 57,735 cells. P. W. LEETE.

Sylvan Beach, N. Y.

Unfit for Winter Food.

There is a cider mill and jelly factory about 20 rods from my apiary, and the owner keeps the doors open while boiling the jelly. It is only a cheap board house, the cracks are open all around, and many of my bees are cooked. The proprietor formerly threw the pomace in the creek, but was obliged to stop that, and now throws it out on the ground. Will it harm my bees, and has he a right to boil cider without protecting his pan and fire so the bees cannot reach them ? I have kept bees here for over 21 years. The cider mill was put in long after I began keeping bees, and the jelly-pan was put up two or three years ago. The owner and myself are not at swords' points, but since he deposits the pomace on the ground, I would like to know what is best for me to do. Please answer in the next BEE JOURNAL.

R. D. REYNOLDS.

Cooperstown, Pa.

[Bees will work on the pomace, and store the juice if not prevented from doing so. This cider will soon become sour, and if used for Winter food, will entail heavy losses in bees by diarrhea. The jelly factory should be enclosed with mosquito-bar or wire-cloth to keep the insects out. You should endeavor to induce the owner to do this, or offer to share the expense with him. The cost will be trifling to screen the doors, windows and cracks, and even if you should bear the whole expense, it might pay you to do so.

If the bees have already stored the cider, you should exchange those frames for others containing good honey, or feed them sugar syrup for Winter stores. The combs of cider may be used in the Spring, when the bees can fly often, but will not do when the are confined during cold weather.—ED.]

Black vs. Italian Bees.

On page 342, Mr. Harker tells us how much better the German bee is than the Italians. He says that they (the blacks) are more gentle to handle. Now, the only way I can account for that statement is to assume that he dislikes foreigners, and champions the black bees, thinking that they are natives of this country. But, joking aside, I think if Mr. H. would try some one's bees that worked for honey as well as queens, that he will get bees that will suit him better than his blacks.

Braceville, Ills. JOHN BURR.

Indiana State Fair.

The bee and honey exhibit at the Indiana State Fair was an interesting one, although, owing to the poor honey season, the display was smaller than usual. There were 4 exhibitors, and the number of premiums taken by each is placed in parentheses, after each name: Julius Moesch, North Indianapolis (11); R. S. Russell, Zionsville (5); Mrs. Moore, Greensburg (1); Walter S. Pouder, Indianapolis (15). Mr. E. S. Guthrie, of Greensburg, acted as judge.

Indianapolis, Ind. W. S. POUDER.

Gathering Honey from Golden-Rod.

Bees in Northern Ohio have been enjoying a big time on golden-rod now for about 10 days, and filling their combs to the bottom of the hive—the nights are too cold to get them into the sections. The clover and basswood honey crop is short here this Summer—about one-fourth of a crop. I wish to go South the coming Winter, to try to get rid of the grip. Will some one in Tennessee advise me where to go? E. GREELEY.

Lorain, O., Sept. 21, 1891.

Wavelets of News.

Young Bees and Fall Honey.

A successful apiarist manages his bees to suit the country in which he lives. What might be best for Florida, would not suit Michigan or Canada. The Fall flow of honey throughout Central Illinois was about a fortnight late, and some species of golden-rod (*Solidago*) are just opening. Polygonum, sometimes called heart's-ease, has commenced to bloom, and bees are gathering a little white honey. Madeira vines, wild cucumbers and mints are also blooming. Strong colonies may be able to store a little surplus honey, but bees do not build much comb in the Fall, unless the weather is unusually warm.

Strong colonies of bees, throughout the Northern and Western States, which are rearing brood during this month, will have plenty of young bees, full of vitality to endure the Winter's cold. Old bees which are worn out with the season's work, will succumb to the first cold blast. It is much better to see that during this month bees are supplied with stores to last until honey is again in the fields, than to feed them in the early Spring months.—*Orange Judd Farmer.*

Sheep and Bees.

For a fruit-grower to antagonize bee-culture argues the most stolid ignorance and stupidity; but there are numerous cases on record where much opposition has come from that source. We have had one instance in this State, even, of a sheep-raiser who went to law with his bee-keeping neighbor, alleging that his bees injured the clover in the pasture in which the sheep grazed.

It is perfectly well known to bee-keepers that bees not only do not injure the plants or fruit which they visit in gathering honey, but the bees are almost indispensible to the fertility of the flowers.

Many bee-keepers are engaged in fruit culture also, and regard the presence of bees as a great benifit to the product of fruit, rather than a damage to it. One of our most enlightened and progressive bee-keepers is a sheep-raiser, and has no fear that the little busy bee, while improving each shining hour (as Dr. Watts says), visiting the clover blossoms of the sheep pasture, will withdraw aught of their nutritive property.—DR. J. W. VANCE, in the *Wisconsin Farmer.*

Sugar Syrup for Bees.

Syrup for bees can be made of any of the cheaper grades of sugar; but when feeding for Winter stores, by all means use the best grade of granulated sugar. Take, say, 12 pounds of sugar and 4 pounds of water; bring it to a boil, this will make a syrup of the proper consistency.

I have repeatedly tried tartaric acid to prevent granulation, but have not been able to notice any benefit and do not recommend it; however, if about 2 pounds of extracted-honey be stirred in as you lift the syrup from the fire, it will do more to retard granulation in the combs than anything that I know of; it will also impart the honey flavor to the syrup, thus making it sought after by the bees.

I notice that some of our friends entertain the idea that by adding more water to the syrup it will go farther. This is an erroneous idea, the bees will evaporate the water and reduce it to a thickness consistent with keeping qualities. If the "blessed bees" were deprived of this faculty, watery sweets would become sour and rancid in their cells.—WALTER S. POUDER, in the *Indiana Farmer.*

Well Pleased.—The Sewing Machine and Scales are received in good order, and I am well pleased with them. They do good work. The sewing machine is ornamental as well as useful. The scales are very handy for family use.—G. RUFF, Burlington, Iowa.

Convention Notices.

☞ The Capital Bee-Keepers' Association will meet in the Supervisors' Room of the Court House, at Springfield, Ills., on Oct. 10, 1891, at 10 a.m.

C. E. YOCUM, Sec., Sherman, Ills.

☞ The Southwestern Wisconsin Bee-Keepers' Association will hold its next meeting on Wednesday and Thursday, Oct. 14 and 15, 1891, at Fennimore, Grant Co., Wis.

BENJ. E. RICE, Sec., Boscobel, Wis.

☞ The 5th semi-annual convention of the Missouri State Bee-Keepers' Association will be held at Sedalia, Mo., on Wednesday and Thursday, Oct. 7 and 8, 1891. Rates for those attending are promised at the Sicher and Kaiser Hotels at $1.50 per day each. All persons so desiring are requested to make apiarian exhibits. A cordial invitation to attend the convention is extended to everybody.

J. W. ROUSE, Sec., Mexico, Mo.

☞ The Northwestern Bee-Keepers' Society will hold its annual convention at the Commercial Hotel, corner of Lake and Dearborn Streets, in Chicago, Ills., on Thursday and Friday, Nov. 19 and 20, at 9 a.m. Arrangements have been made with the Hotel for back room, one bed, two persons, $1.75 per day, each; front room, $2.00 per day for each person. This date occurs during the Exposition, when excursion rates on the railroads will be one fare for the round-trip.

W. Z. HUTCHINSON, Sec., Flint, Mich.

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BEE JOURNAL

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Advertisements intended for next week must reach this office by Saturday of this week.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

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We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

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The American Bee Journal	$1 00	
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Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The 7 above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
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Prairie Farmer	2 00	1 75
Illustrated Home Journal	1 50	1 35
American Garden	2 50	2 00
Rural New Yorker	2 50	2 00
Nebraska Bee-Keeper	1 50	1 35

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

◆

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

◆

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

◆

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00. For sale at this office.

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

The Bee-Keepers' Directory, by Henry Alley, Wenham, Mass. It contains his method for rearing queens in full colonies, while a fertile queen has possession of the combs. Price by mail, 50 cents.

Binders made especially for the BEE JOURNAL for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the BEE JOURNAL (with $1.00 to pay for the same), or 2 subscribers to the HOME JOURNAL may be sent instead of one for the BEE JOURNAL.

YOU NEED an Apiary Register, and should keep it posted up, so as to be able to know all about any colony of bees in your yard at a moment's notice. It devotes two pages to every colony. You can get one large enough for 50 colonies for a dollar, bound in full leather and postage paid. Send for one before you forget it, and put it to a good use. Let it contain all that you will want to know about your bees—including a cash account. We will send you one large enough for 100 colonies for $1.25; or for 200 colonies for $1.50. *Order one now.*

Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ The sewing machine I got of you still gives excellent satisfaction—W. J PATTERSON, Sullivan, Ills.

When Writing a letter be sure to sign it. Too often we get letters with the name of the post-office, but no County or State. One such came recently, and we looked into the Postal Guide and found there were places by that name in 13 States. That order for goods will have to wait until another letter comes to give the proper address. Be sure to stamp your letter, or it may go to the dead letter office.

Pleasant Employment at Good Pay.—The publishers of SEED-TIME AND HARVEST, an old established monthly, determined to greatly increase their subscription lists, will employ a number of active agents for the ensuing six months at $50.00 PER MONTH or more if their services warrant it. To insure active work an additional cash prize of $100 will be awarded the agent who obtains the largest number of subscribers. "The early bird gets the worm." Send four silver dimes, or twenty 2-cent stamps with your application, stating your age and territory desired, naming some prominent business man as reference as to your capabilities, and we will give you a trial. The 40 cents pays your own subscription and you will receive full particulars. Address

SEED-TIME AND HARVEST,
10A8t La Plume, Pa.

HONEY AND BEESWAX MARKET.

NEW YORK, Sept. 25.—Comb-honey now arriving. Extracted in good supply, with limited demand. We quote: Comb, fancy white, 1-lb., 15@16c; 2-lb., 13@14c; fair white, 1-lb., 13@14c; 2-lb., 12c. Extracted—California, basswood and orange bloom, 7@7½c; common Southern, 65@70c ℘ gal.; choice, 70@75c. Beeswax, dull, 25@26c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, Sept. 26.—The demand is steady and supply light. We quote: White comb, 15@16c; dark, 10@12c. Extracted, white, 7@7½c; dark, 5@6c. Beeswax, in light supply and good demand, at 23@26c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Sept. 26.—Demand is good, with fair supply. We quote: Choice comb, 14@16c. Extracted, 5@8c. Beeswax is in fair demand and good supply, at 23@25c for good to choice yellow.
C. F. MUTH & SON,
Cor. Freeman & Central Aves.

NEW YORK, Sept. 25.—Demand for honey is increasing, but is exceeded by supply. We quote: Fancy 1-lb. comb, 15@16c; 2-℔., 14c; fair, 1℔., 13@14c; 2-℔., 13c. Extracted—California, 7c; clover and basswood, 7@7½c. Beeswax—in fair demand, with adequate supply, at 25@27c.
CHAS. ISRAEL & BROS., 110 Hudson St.

CHICAGO, Sept. 26.—Demand is active for white comb-honey; supply limited. We quote: Fancy, 16c; other grades 14@15c. Extracted, 7@8c. Beeswax, quick sale, at 26@27c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Sept. 26.—The demand is good, with light supply. We quote: Comb—1-lb. white, 16c; dark, 12c; 2 lb. white, 14c; dark, 10c. Extracted—white, 7c; dark, 5@6c. Beeswax, supply and demand light, at 25@26c.
HAMBLIN & BEARSS, 514 Walnut St.

DETROIT, Sept. 26.—The demand for comb-honey is fair and supply good. We quote: Comb, 12@13c; extracted, 7@8c. Beeswax in good supply, and light demand, at 25@26c.
M. H. HUNT, Bell Branch, Mich.

CHICAGO, Sept. 26.—The demand is slow for 1-℔. comb-honey, with good supply. We quote: Choice white comb, 14@16c. Extracted, 6@8c. Beeswax, in light supply, and demand slow, at 27c. J. A. LAMON, 44-46 S. Water St.

ALBANY, N. Y., Sept. 25.—Demand improving; supply moderate. We quote: White comb, 12@17c. Extracted, 7@8c. Beeswax, scarce and in good demand at 28c.
H. R. WRIGHT, 326-328 Broadway.

NEW YORK, Sept. 25.—Demand good, with fair supply. We quote: No. 1 comb, 16c; No. 2, 13@14c. Extracted—California, 7@7¼c; basswood, 7¼@8c; Southern, 65@70c per gal. Beeswax, supply and demand fair, 26½@27c.
F. G. STROHMEYER & CO., 122 Water St.

SAN FRANCISCO, Sept. 21.—Demand good, supply small. We quote: Comb, 1-lb., 12@14c. Extracted, 5¾@6½c. Beeswax, in light supply and fair demand, at 23c.
SCHACHT, LEMCKE & STEINER,
16 Drumm Street.

CHICAGO, Sept. 26.—Demand is now good, supply is not heavy. We quote: Comb, best grades, 15@16c. Extracted, 6@8c. Beeswax, 26@27c.
R. A. BURNETT, 161 S. Water St.

BOSTON, Sept. 25.—Demand good, supply ample. We quote: 1-℔. fancy white comb, 15@16c; extracted, 7@9c. Beeswax, none in market.
BLAKE & RIPLEY, 57 Chatham St.

NEW YORK, Sept. 25.—Demand increasing, supply light; very little No. 1 white comb-honey arriving. We quote: Fancy 1-lb. comb, 18c; second quality, 15@16c; buckwheat, 1℔. 11@12c. Extracted—in good demand at 6@8c for white. Beeswax, in light supply and good demand, at 27@30c for choice yellow.
F. I. SAGE & SON, 183 Reade St.

We Club the American Bee Journal and the Illustrated Home Journal, one year for $1.35. Both of these and Gleanings in Bee Culture, for one year, for $2.15.

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms.

☞ The Union or Family Scale has been received, and I am much pleased with it. W. H. KIMBALL.
Davenport, Iowa.

Red Labels are quite attractive for Pails which hold from 1 to 10 lbs. of honey. Price, $1.00 per hundred, with name and address printed. Sample free.

Very Punctual.—I was surprised to receive the feeder as soon as I did. I like it very well. I receive mail matter in a shorter time from you than from Carlisle, O., only eight miles from here.
JOHN H. ROHRER.
Tippecanoe City, O., July 16, 1891.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line,** for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

5,000 POUNDS Extracted-Honey wanted.
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HEADQUARTERS
FOR THE

Bee-Keepers' Convention,

NOVEMBER 19 & 20, 1891.

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THOMAS G. NEWMAN,
EDITOR.

Vol. XXVIII. Oct. 8, 1891. No. 15.

Editorial Buzzings.

Queens now go by mail to Australia. Brother Root has sent several to that colony through the mails.

The Food Exposition of Manufacturers, dealers and consumers will be held at the Madison Square Garden, New York, next week.

Our Friend A. E. Manum, of Bristol, Vt., was married to Miss Hattie C. Barnum on the 16th ult. The BEE JOURNAL wishes them joy and happiness through life.

Large Queen.—Brother E. L. Pratt has a 6-pound queen. She arrived Sept. 20. Congratulations. This queen will probably do more "piping" the next few months than Brother Pratt has been accustomed to hear, as 'tis the first born in his home apiary.—*Apiculturist.*

The Bee World has been merged into the *American Bee-Keeper*, of Jamestown, N. Y. The latter has a great capacity for swallowing up its cotemporaries. It had already taken the *Advance*, the *Bee Hive*, and now takes the *World*. Will "the *World*" satisfy the Falconer Company?

Bee-Keepers will congregate in Chicago on Nov. 19, to have a happy reunion. Brother Hutchinson, editor of the *Review*, gave it the following notice last month:

> The Northwestern bee-keepers will hold their annual convention Nov. 19 and 20, at the Commercial Hotel, corner of Lake and Dearborn Streets, Chicago, Ills. This date occurs when excursion rates on the railroads will be one fare for the round trip. I have tried several times to analyze my feelings and decide *why* I always look forward with unusually happy anticipations to these annual meetings of the Northwestern bee-keepers. Can it be that it is because it is the one convention that sails in without any essays, or even so much as a printed programme?

Prof. Cook writes us that he did not give the name "bug-juice" to the secretions of the aphidæ. We were under the impression that he was its author, and so stated on page 393. We expected to find proof on page 488 of *Gleanings* for July 1, 1890—but there we only find that in referring to honey-dew from bark-lice, he uses this language: "This is always rank, dark, and unwholesome. It is good to sell for manufacturing purposes only." On page 52 of the BEE JOURNAL for July 9, 1891, R. T. Davis mentions "bug-juice;" but the first place where we noticed its use was in *Gleanings* for 1888, page 494, where Jno. Nebel & Son, speaking of honey-dew, remark thus: "Should it continue to last until the first of August, we shall have *bug-juice* in abundance." Whether they originated the term or not, we are not now prepared to say. Perhaps they will inform our readers on that point.

Free Delivery of mail in the rural districts is one of the things to expect in the near future. A trial has been made by the Postmaster General, and the result is very encouraging. Congress is expected to legalize this free delivery at its next session. This will be *a boon* to bee-keepers and farmers generally, giving them much needed mail facilities. Letters and papers will be received with more regularity, greater interest will be maintained in current literature, and "knowledge will be increased" in an astonishing degree.

The following extract from a letter from Washington, D. C., shows what has been accomplished by our energetic Postmaster General:

> The present Postmaster General has discovered that no matter in what way the postal facilities are increased, added business and added revenue are sure to follow.
>
> He has established scores of sub-stations in cities; established hundreds of small post-offices; added railway mail trains, and made them faster; put clerks in the post-offices, and added carriers; expedited the special delivery; caused examinations of post-offices by the thousand, so that the ideas of postmasters might be interchanged; and, in a general way, by drawing attention to the minutest, as well as the largest operations of the service, caused people generally to take an interest in it, and hence to use it more.
>
> He has argued in the postal telegraph fight that the reduction of rates for telegrams which he proposes, and the facilities which he offers for collecting and delivering them, would not be a cause of loss to the telegraph companies, but, on the other hand, would add to their revenues. He proposes to reduce the registry fee.
>
> He argued in the postal savings bank fight that with the establishment of the postal savings bank in the communities where it is now inconvenient to make deposits of savings, not only would the general business, as well as the special business of the post-offices be increased, but also that the activities of all business men would be added to by the tremendous additions of quick capital which these savings would inevitably involve.
>
> So of the free delivery experiments—every sign promises success.

The Many friends of Mr. George E. Hilton will be interested in the following letter, detailing his sickness and present condition:

> DEAR FRIEND NEWMAN:—You have always exhibited more than a common interest in my welfare, and I know you will be glad to learn of my present condition, as it is an improvement over the past four weeks. I have not been out yet, and can only sit up a little while at a time, but am recovering from perhaps the most serious illness of my life. I was taken on the first day of September with a terrible hoarseness and Summer complaint, but kept around until the 7th, when I was taken with neuralgia in ever muscle in my body. I was 12 miles from home at the time, and by the time I reached home and got a doctor, I was nearly wild. The doctor has since told me that I would soon either have been in spasms or insane.
>
> Well, about the time they got this condition out of me by perspiration, I was taken with congestion of the left lung. This caused incessant coughing and expectoration, which brought on prolapsus of the lower bowels with hemorrhage. This weakened me more than all else, and accounts for my present weak condition, both physically and mentally, as you will detect by this letter.
>
> I was very rebellious during the early part of my sickness. The honey crop was a failure, and other things combined to make it the poorest season for years, and I felt the necessity of taking up my old occupation for a time—contracting and building—was fortunate in securing a contract that was worth $5 a day to me. I was on the works five days when I was stricken down, and the doctor says I can do nothing more this Fall in that line. The work is going on under the supervision of my brother, but you know I ought to be there, too.
>
> GEO. E. HILTON.

We hope for a speedy recovery, and a permanent cure, restoring our friend to his usual health and activity.

* * *

The North American Bee-Keepers' Convention will be held at Albany, N. Y., Dec. 8 to 11. Reduced rates on all the trunk line railroads are secured. The official notice is printed on page 472. Read it carefully,

Epidemic Influenza, or what is more commonly known as *la grippe*, is reported to be again commencing to attack humanity with more than ordinary severity. We have cause to fear that the coming Winter will be more prolific of this terrible disease than any of the previous ones. The *Scientific American* gives a new theory of this disease, and remarks as follows :

> The unaccountable nature of the influenza commonly known as the *grippe*, has invited the theories of all sorts and conditions of men, not to say of doctors, but among all no one is, perhaps, so well calculated to commend itself to confidence as that of Sir Morell Mackenzie, M. D., who, in the June *Fortnightly*, asserts that in his opinion "the riddle of influenza is poisoned nerves," and from this hypothesis "the bewildering diversity of the symptoms becomes intelligible, if we regard them as the results of disordered nervous action."
>
> Dr. Mackenzie compares it to the extraordinary disturbance in telegraphic systems produced by a thunder storm, and says this is nothing "compared with the freaks played by the living conductors in the human body, if anything throws the governing centers out of gear."
>
> Now the theory of "poisoned nerves" is one that explains the almost infinite variety of attacks and curious freaks that mark the disease. No two persons, it is safe to say, have ever experienced precisely the same symptoms, and if it is a nervous disturbance, this is the natural result.
>
> Dr. Mackenzie regards the epidemic as falling under three general types, each of which include many varieties ; these are the catarrhal, the digestive, and the nervous. "Influenza," he says, "is the very Proteus of diseases, a malady which assumes so many forms that it seems to be not one, but an epitome of all diseases, and its symptomatology includes almost everything, from a cold in the head to inflammation of the brain.......It is really an acute specific fever, running a definite course, like measles or scarlatina......It is a disease with that superficial complexity of aspect which made Mrs. Carlyle playfully suggest that the doctors had agreed to call half a dozen different diseases by one name in order to simplify treatment."
>
> Dr. Mackenzie adds that under all its disguises, he believes the disease to be perfectly simple ; that the profound impression made on the nervous system by the poison explains nearly all the after effects of the malady, and especially that curious loss of vital energy which is so disproportionately great in comparison with the disease itself. The cause Dr. Mackenzie believes to be a living germ, air borne, but of what nature is not yet, he believes, established.

◆

The Father of our friend R. F. Holterman died on October 1, 1891.

◆

Mr. J. E. Snider, an apiarist of Utah, gave us a call last week. He says that their principal pasturage is sweet clover, and consequently their main honey crop comes in the Fall. The quality of the honey is excellent, and the quantity is almost unlimited—thousands of acres of sweet clover go to waste every year because there are not enough bees to gather the nectar.

◆

Half a Million pansies, one hundred thousand roses, and millions of other flowers, including every known variety and species, will be seen at the Exposition. The horticultural exhibit will be on a scale never before attempted in the history of the world. Mr. Thorp, of the floriculture division, estimates that the equipment of the horticultural building, including the purchase price of plants, will be $350,000, and the total expense of the display $750,000. The floriculturists of the country will donate a large share of the plants. Ten of the sixteen acres of ground on the wooded island will be planted in flowers. The shores of the island will be left wild for scenic effect, and the waters around the margin of the island will be bright with water lilies and other aquatic vegetation, while the interior of the island will be planted with roses, rhododendrons, and lilies, besides a vast variety of wild flowers, which are at present preserved in a nursery on the island.

◆

Eugene Secor is a lay delegate to the General Conference of M. E. Church.

Fruit is a grand appetizer and tonic. To eat more fruit and less flesh would no doubt be an improvement for many persons. In view of the fact that *la grippe* will most likely ravage this country again next Winter, we advise all to eat more fruit, and take all the honey that their systems will readily assimilate. To show how animals appreciate fruit, we give the following from an exchange:

> The apple is highly appreciated by horses, cows, sheep, goats, hogs, deer, elephants, rabbits, squirrels, domestic fowls and many of the wild animals and birds. The persimmon is greedily devoured in immense quantities by opossums and dogs. The fig is a favorite food among animals—horses, sheep, goats, hogs, camels, elephants and fowls greedily devouring it. The cherry, as our fruit growers well know, is a delicacy which the whole feathered tribe contend for. Peaches are only relished by a few animals, among which may be mentioned the rabbit. Grapes are eaten with great relish by horses, cows, sheep, deer, hogs, camels, elephants and sometimes by dogs and many wild animals. Dried fruits of all kinds are eaten with avidity by the Eskimo dogs. Fruits, such as the orange, lemon, lime, shaddock, sour plum, green olive, etc., are shunned by nearly all kinds of animals, as they are by worms. Olives, when they become thoroughly ripe, will readily be eaten by hogs, after they have once acquired the taste. The ostrich will eat many kinds of fruit with enjoyment. Nuts of nearly all kinds are relished and sought after by squirrels, monkeys, hogs, parrots and many other kinds of animals and birds.

Happy Family.—This item was in the Chicago *Tribune* recently:

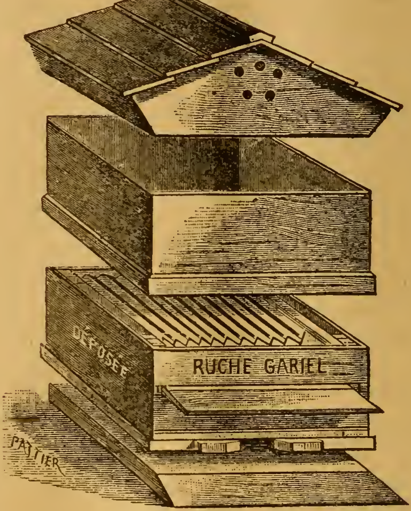
> A tree near Firth, Mo., contained 12 ground hogs, 10 skunks, 2 swarms of bees, and a large lot or fine honey.

What a "fine" mess! Fancy a lot of *fine* honey perfumed by 10 skunks! Indeed, it is a "fine" story in every way.

Skunks have an insatiable appetite for honey, and will brave the stings of bees to get it. How long would that honey remain in the tree, if the skunks could get at it? They will also catch the bees for the honey they contain.

They have often been known to scent a bee-tree and make a raid upon it for the honey—but for these "thieves" to live in peace with the bees, within scent of the honey—never! It's a skunk story!

Here is a Hive, the sale of which is now being pushed by Raymond Gariel, in Paris, France. The word "Ruche" on the engraving means "Hive." It has shallow frames, a loose bottom-board and a gable roof. It is interesting to know what is being used apiculturally in other countries.



Convention Notices.

☞ The Capital Bee-Keepers' Association will meet in the Supervisors' Room of the Court House, at Springfield, Ills., on Oct. 10, 1891, at 10 a.m.
C. E. YOCUM, Sec., Sherman, Ills.

☞ The Southwestern Wisconsin Bee-Keepers' Association will hold its next meeting on Wednesday and Thursday, Oct. 14 and 15, 1891, at Fennimore, Grant Co., Wis.
BENJ. E. RICE, Sec., Boscobel, Wis.

☞ The 5th semi-annual convention of the Missouri State Bee-Keepers' Association will be held at Sedalia, Mo., on Wednesday and Thursday, Oct. 7 and 8, 1891. Rates for those attending are promised at the Sicher and Kaiser Hotels at $1.50 per day each. All persons so desiring are requested to make apiarian exhibits. A cordial invitation to attend the convention is extended to everybody.
J. W. ROUSE, Sec., Mexico, Mo.

☞ The Northwestern Bee-Keepers' Society will hold its annual convention at the Commercial Hotel, corner of Lake and Dearborn Streets, in Chicago, Ills., on Thursday and Friday, Nov. 19 and 20, at 9 a.m. Arrangements have been made with the Hotel for back room, one bed, two persons, $1.75 per day, each; front room, $2.00 per day for each person. This date occurs during the Exposition, when excursion rates on the railroads will be one fare for the round-trip.
W. Z. HUTCHINSON, Sec., Flint, Mich.

Each Man Builds Himself.

Pygmies are pygmies still, though perched on
Alps;
And pyramids are pyramids in vales;
Each man makes his own stature, builds him-
self:
Virtue alone outbuilds the pyramids.
Her monuments shall last when Egypt's fall.
—Young.

Queries and Replies.

Covering for Brood-Frames.

Query 787.—One colony of my bees worked their way up through the cloth and perished, and last Summer some bees tore holes in the cloth and got up with the same result. 1. What was the cause? 2. Was it different cloth from what should have been used?—Minn.

I believe your second question answers the first.—J. M. Hambaugh.

Use something on top of the cloth, so that the bees cannot get above, should they work through.—G. M. Doolittle.

Duck is the best. I generally use heavy Indian head muslin, and when they tear holes in it, put on new.—Mrs. L. Harrison.

Cloth of any kind—burlap, rubber, or what not—I consider a "delusion and a snare." A board is good enough for me. —Eugene Secor.

Cloth is not desirable to cover brood-frames. I use a thin board, cleated at the edges, and a bee-space from the frames.—G. L. Tinker.

1. I do not know. 2. Cloth, like duck or oil-cloth, could not have been eaten through, and so there would have been no such experience.—A. J. Cook.

Why use cloth at all? A board with suitable bee-spaces, and a hole in the center for a bee-escape, is much better for all purposes then cloth.—C. H. Dibbern.

I never could discover any benfit from using cloth about a bee-hive, either in Summer or Winter. Its use will finally become absolute, and should be so now. —James Heddon.

If I understand the question, I cannot see why your bees would leave the combs and stores in the brood-chamber and go to the second story, unless the combs were foul, and the stores, *if they had any*, were unhealthy.—J. P. H. Brown.

1. Bees will make holes when they can. The cause is something like general "cussedness." 2. Likely the cloth may have been all right, but a board is better.—C. C. Miller.

1. Bees will get through any cloth in time. I would not use any cloth except when there is packing above to protect the bees in wintering out-of-doors, or in Spring.—R. L. Taylor.

1. Bees will usually work through any woven substance that they find in their hives. They will continue to pull off the loose fibers until the whole is gone. 2. It is better, as I think, not to use any cloth.—M. Mahin.

1. With so little data given, one (or at least I) can only guess, and one guess is as good as another, so I guess I will not guess on this. 2. As you do not say what kind of cloth was used, I will not attempt to guess on this either.—J. E. Pond.

1. I do not know; but if I had bees that did not know enough to get out of a hole they made and went in through, I should want them to die. 2. Probably not; but different bees might be better, and then again they "mightn't."—A. B. Mason.

If you had surplus cases on your hives what were you doing with an empty space above the bee-quilt? And if you had no surplus cases on the hives in the Summer, why not? 1. Your carelessness or mismanagement, or both. 2. No. Bees will cut holes in any sort of cloth that I have used. I venture to guess that a solid board is the best after all.—G. W. Demaree.

1. Something must have been wrong, or the bees would not leave the breeding apartment to go above and perish when there was nothing to call them up there. Either the stores were bad or the air was foul. 2. Bees do not *eat* or *gnaw* through cloth. They sometimes find threads and pull them out, and thus make holes. The day for cloth over frames is fast passing away. A good board will prevent the bees from going above, and be a better covering every way.—The Editor.

California Honey is now second choice beside the Colorado product, says a Colorado paper.

Old-Time Songs.

The songs we used to sing? Ah, me!
I love them, and if I could bring
My voice their sad, sweet notes to sing,
The air should with an anthem ring
Of sweetest melody.

The songs we used to sing? Ah, me!
Their music fills my heart with tears,
For those lost hopes of long gone years,
That Time's eternal river bears
On to Eternity.

The songs we used to sing? Ah, me!
In dreams I hear each tender strain,
In mystic minor sung again—
I wake, and dies the sweet refrain
To all but memory.
—New Orleans Times-Democrat.

Topics of Interest.

Create a Home Market for Honey.

GEO. M. DEER.

The honey crop in this locality this year is only about one-fourth of an average. The weather was so dry early in Spring that white clover was about dried up, and basswood did not yield much nectar. The Fall bloom amounts to nothing, and I shall be compelled to feed sugar to my bees, and buy honey for my home trade, which, I think, will require about 5,000 pounds. This is an illustration of how much honey can be sold by one man, if he only has it in such shape that the people can handle it, and I think I could sell 10,000 pounds by working hard.

I believe in building up a home trade, and not shipping so much to large cities, thereby flooding the market, and depressing the price to the detriment of all bee-keepers. Sell some to your neighbors, who have not enough honey to supply their customers, and keep all the honey possible out of the markets that govern the price. By so doing better prices will prevail in course of time.

Let the public know that you have honey for sale, and the price per pound. Tell them that it is not a dear article, and when you once induce a man to try good honey, you have another customer, and he will tell his friends, and they, in turn, will speak of it to others, and in course of time you may have to advertise for honey to supply the demand.

Perhaps some of your neighboring bee-keepers will have their honey stored away, and as they make no effort to sell it, no one knows that they have it for sale, except their near neighbors and friends, and if they cannot get a fair price, they will sell their honey for what they can get, thus lowering the price. The best way is to hunt up such persons, and buy all they have for sale, and in that way uphold prices.

There would be vastly more demand for honey, if the public were only taught that it is not an expensive luxury, but is the best kind of medicine for various ailments, and that it is not bad to eat when a person is enjoying good health.

If bee-keepers would try to build up a home trade, instead of shipping their honey to the large cities, it is my opinion that the demand would soon be so great that we could as easily obtain 15 cents per pound for our product as we now obtain the ruling prices.

Riga, Mich.

Native or Black Bees, and Italians.

G. W. DEMAREE.

It is a little singular to notice that some one steps into the ring at stated intervals to defend the native, or black bees. This seems strange to me in view of the fact that the native bees are to be found everywhere, and if there is so much good in them, honey-producers will discover it. People do not carry their delusions always where the dollar is involved.

Mr. Ellingwood, on page 399 of the BEE JOURNAL, makes a modest defense of the good qualities of the native, or black bees. But in comparing these with the Italian race, he makes these very important concessions in favor of the Italians:

1. The Italians bees are more beautiful to look upon.
2. They can gather honey from certain flowers that the blacks do not work upon.
3. They protect their hives better.

"Here," he says, "are three points of superiority." But he refuses to admit any more. We will see about this further on.

Does Mr. Ellingwood know how much he has conceded to the Italians, as he puts it? Any farmer who has no regard for beauty in his domestic animals after their kind, would be regarded as a poor farmer in any thrifty locality.

That trait of gathering honey from flowers never visited by black bees cannot be offset by any superior trait of the black race. It amounts to the difference of the cost of Winter stores, in my locality, in the average season.

"They protect their hives better." This means more than is seen on the surface. The Italians not only protect their hives better from robber bees, but much better from the inroads of the moth worms. They are better sanitarians. The sections taken off are less liable to be infested with moth eggs, to hatch out worms to prey upon the combs. I can crate my sections immediately after removing them from the hives. Dare any man do that when taking sections from black colonies?

But now I will add a fourth superior quality in the Italians that Mr. Ellingwood will readily admit: The Italians, when the hive is opened, are not so sensitive to the admission of the light into their hives. They do not lose their heads, go wild and scamper and stampede, like wild cattle, as do the native bees. They stand their ground, stick to their combs, and protect them from any robbers that may be prowling after plunder. Therefore, they are more rapidly handled, and the work is done with less worry, and time is saved.

There is a fifth superior trait in the Italians that could not have escaped Mr. Ellingwood's attention: They bear up under adversity in a way that the native bees are utter strangers to. I have seen a mere handful of Italian bees keep from 20 to 30 combs of Langstroth size clean and sweet through the two hot months of July and August, living from hand to mouth, day by day, from the few drops of nectar gathered from flowers that are never visited by black bees.

I cannot admit all of the few modest "superior" traits of the black race set down to their account by Mr. Ellingwood. They are not extravagant, but my experience is not in accord with them.

As to the wintering qualities of bees, my locality is too moderate in climate to make my observations valuable when judging bees in this respect. In my locality I can see no difference if the conditions are the same, but less feeding is necessary with the Italians if the honey season chances to be poor.

As to their robbing proclivities, all bees that I have handled do not object to "plunder," and the strongest are the most dangerous if they once get a taste of "boodle." The black bee is not so daring and plucky a robber as is the yellow bee, but as a persistent sneak thief she has no rival among her yellow sisters. Her "ways are dark and her tricks are vain." An old friend of mine who kept black bees exclusively, used to declare that there were "professional robbers" among his bees, and they kept his apiary in an everlasting "stew" during a honey dearth.

As to their swarming less than other races of bees I cannot say how this is; perhaps different persons would decide differently on this point. If the honey-flow is profuse and extended, the black bee shows off at her best, and will teach other races of bees, and the apiarist, too, a lesson on swarming. Being more easily discouraged, however, than their yellow sisters, they may swarm less in a general way.

I think the best and most tenacious races of bees will give the apiarist, who wishes to suppress swarming, the most trouble. It is in accord with all we see in nature that it should be so.

Mr. Ellingwood says of the black bees: "They gather more surplus honey." This is the first time I have seen or heard of such an assertion. It is contrary to my experience, and contrary to nearly all of the numerous reports that I have read touching the matter.

I know it has been claimed—and, I believe, hastily conceded by many—that the black bees enter the surplus cases more readily than do the Italians, but I have never seen the slightest evidence that such are the facts, though I have handled them in the same apiary with Italians for years.

I believe that bad management and lack of knowledge concerning the honey-flow is at the bottom of all the complaints about bees entering the surplus cases. Bees cannot store honey in surplus cases when there is not enough honey coming from the fields to justify the starting of new work. When the honey-flow is on in my locality, my bees go right into the surplus cases, and the greatest trouble is they will store more of their honey in the surplus cases than is safe for them to do, if they have a greedy master.

In conclusion, I have to say that Mr. Ellingwood's experience with Italians and hybrids, as related by him, is so utterly dissimilar to the experience of thousands of others who have handled both races together, that his account must be set down as a rare exception.

He may advertise in all the bee-periodicals, and he cannot find another intelligent bee-keeper who will report that 6 colonies of black bees have gathered and stored more surplus honey than 35 colonies of Italians and hybrids, in the same apiary, and at the same time, all having the same care and attention to make them ready for the honey harvest. If he can get just one such report from any experienced, reputable apiarist, I will engage to furnish him with 6 tested Italian queens, free of cost, that will give him 6 colonies of Italian bees which will beat his 6 colonies of blacks with his 35 colonies of Italians and hybrids "thrown in," taking his report as a basis.

I am by no means talking at random about these things; I have tried nearly all the races and types of bees, and there is not nearly as much difference in their working qualities as many people imagine, but the Italian type of bees stands at the head of the list, all things considered.

Christiansburg, Ky.

Nebraska State Convention.

J. N. HEATER, SEC.

The thirteenth annual meeting of the Nebraska State Bee-Keepers' Association was called to order in Bee and Honey Hall, State Fair Grounds, on Wednesday, Sept. 9, 1891, at 7:30 p.m., Vice-President E. Whitcomb in the chair.

Minutes of previous meeting read and approved.

Reports of the Secretary and Treasurer were read and approved, and a warrant ordered drawn on the Treasurer in favor of J. N. Heater, for $6.30, to pay a bill of printing call circulars, and for envelopes and postage.

Election of officers deferred until 7:30 p.m., Thursday.

J. N. Heater, on behalf of committee on World's Columbian Exhibition, reported progress, and asked that E. Whitcomb and L. D. Stilson be added to the committee.

Wintering, and unhealthful food for bees during Winter confinement, was discussed at length.

Adjourned to meet at 7:30 p.m., Sept. 10, 1891.

THURSDAY EVENING.

Meeting called to order at 7:30 p.m., the Vice-President in the chair, and as per order proceeded to elect officers for coming two years, which resulted as follows:

E. Whitcomb, of Friend, was elected President; Mrs. J. N. Heater, of Columbus, Vice-President; L. D. Stilson, of York, Secretary; and J. N. Heater, of Columbus, Treasurer.

E. Whitcomb and L. D. Stilson were added to World's Columbian Fair committee.

The Nebraska *Bee-Keeper*, of York, Nebr., was made the association's official organ.

The subjects of Wintering, feeding, Spring dwindling, and producing honey were discussed at length.

Mr. E. Whitcomb, committee on revising premiums, made a report, which was accepted and ordered placed on file.

Resolutions were passed thanking the Nebraska State Fair Association; the retiring officers of the Nebraska State Bee-Keepers' Association, and to Mr. E. Whitcomb, Superintendent of the bee and honey exhibit, State Fair; and that the Secretary is instructed to communicate this resolution to the State Fair Board, and request the appointment of Mr. Whitcomb as Superintendent of this department for the year 1892.

Adjourned to meet in Bee and Honey Hall on Wednesday and Thursday, afternoons and evenings, of State Fair week, 1892.

Columbus, Nebr.

Moving Bees to New Pastures.

A. N. DRAPER.

As it is nearly time to move bees back to the home yards, perhaps a little actual experience will not be unacceptable to bee-keepers who are seeking after the best ways. I moved 11 wagon loads of bees and supplies to the lake, or to the bottoms, for the Spanish-needle crop. But, on account of dry weather, I think the crop of Spanish-needle honey has failed to materialize, and there is scarcely enough honey to Winter the bees on.

The bees are very cross. They are what might be properly called infuriated insects. There is nothing that improves the propensity to sting so much as moving bees in the Summer time. Mr. Hambaugh told me, before I moved any bees to the Spanish-needles, that, "for obvious reasons, the supers should be left on the hives while moving." When moving to the bottom, I always managed to get the bees off of the wagons before daylight.

Last year, when I moved, the Spanish-needles had already begun to yield honey. This year I calculated to have all my bees on the ground early enough to get all of the crop, so I began in time. The first trip I made with two teams from an out-apiary, with 51 hives loaded on two wagons. We had to haul the bees about 9 miles.

It was probably 10 p.m., when we got all of our bees loaded and ready to start. I had all of the roofs fastened on, and the bottom-boards hooked up before dark, and plenty of ventilators on (I use the Hambaugh ventilator). It was a warm evening, and the hives were large, and chock full of bees—there were bushels and bushels of bees in them—which were in just the right condition to gather a heavy crop of honey. I had converted a large amount of my honey-dew crop into bees. These bees were lying out on the outside of the hives, and our hardest job was to get the bees inside, and the entrances closed. This took us until after 9 p.m., and we used a couple of Bingham smokers for all they were worth.

I leave no ventilation at the entrance whatever—simply nail a strip of wood over it. I use 11 brood-frames, the length of the simplicity and depth of the Quinby. On top of these I had a case of 11 6-inch deep surplus frames; next, a Hambaugh ventilator, then a roof 4 inches deep, over this. Whenever the bees found themselves confined, and were jolted on the wagons, they would cluster up in the roof, when there would be a current of air right under the cluster where it ought to be.

How any one could get enough bees in a little 8-frame "dovetailed hive," with a flat roof fitting right close to the brood-chamber is more than I can understand. The colonies must be very weak, or simply nuclei.

With only 23 hives on one wagon, I had a load for my team, and it was a good team, too. I unloaded my bees almost a quarter of a mile from any house—and this is close enough to place them—and I was careful to get them back off of the road. After placing our hives on the ground, and getting our teams away out of reach of the bees, we pulled off the entrance sticks and left for home. By sunup we were back within a mile of home, when I discovered that one of my horses was sick—a fine 6-year-old, that I was offered $150 for not a week before.

By walking and leading her, and a good deal of coaxing we finally got her home. We rubbed her good, gave her just a little water, and as she began eating, and seemed so much better and so comfortable, I made up my mind that she was all right. And as I was very tired, I laid down and went to sleep. In about an hour I was called on account of the racket in the stable, and in another hour my mare was dead. Moral: Do not over-load in moving bees at night.

I moved down 195 hives. I find it almost impossible, in closing up so many hives, to get every one bee-tight. After the first night I used three teams and wagons, and had a driver for each team. One hive—a two-story simplicity that had been in use about 6 years—had its bottom-board so badly decayed that a hole was broken through it large enough to run a man's double fist into. I soon had my big Bingham in full blast, and playing on the bees, as it was bright moonlight, and the bees bothered the horses some. I managed to get a short board crossways under the hive, so as to close the leak. I take water down once a week and fill the barrels that I have there to water the bees, as the lake has gone clear dry—a thing that was never known before by the oldest settlers.

A few hives I did not have the surplus cases on. I found it to be, to say the least, not the most pleasant job that I ever undertook. Unless well protected, a person has no business anywhere near an apiary that has been recently moved in warm weather. On this account I shall not move my bees out of the bottom until cool, frosty weather, as the bees do not seem to be so thoroughly aroused in cool weather by moving them.

It ought to be the duty of every apiarist to see to it that his bees annoy other people just as little as possible. There is no disputing the fact that the air full of angry, stinging bees is enough to arouse the ill-will of almost any disinterested party, and I have no doubt that some people have just cause for complaint. I know that if I should move my bees back now, as warm as it is, I should have trouble wherever I should place them, whether at home or at the out-apiaries.

I should not think of moving bees home to Winter. It does not pay. My out-apiaries are all in places well sheltered from the wind. I have often heard bee-men and others say that they could do lots of work that would pay them to do, that would not pay if they had to hire the work done. In my experience I find this to be a false notion. I find that any kind of hard work that it will not pay to hire done, will not pay me to do myself. In other words, I can accomplish enough more, and do it easier, by having plenty of good help to take the heavy work off of my hands.

Now, in moving bees I have help enough so that I do not have to lug my hives to the wagon myself. Here at home, when I load up, we have to carry the bees clear outside of the bee-yard. We loaded 65 hives on the three wagons here, and I had four men to carry them out and lift them up to me while I placed them on the wagons. I find that one good hive of bees makes a load for two men to carry.

I should say, from my experience, that unless a colony of bees is strong and in condition to gather a crop, it will not pay to move it.

From one lot of these bees that I moved, I had but recently removed the crop of honey-dew, and did not replace the supers until after I moved them to the bottom. The bees were so cross that it was almost impossible to put the surplus cases in place.

On page 737 of *Gleanings*, Sept. 15, in a foot-note to J. A. Green's article on moving bees to new honey fields, are some statements on which I would like the opinions of the readers of the BEE JOURNAL. Commencing in the first column, about one-fourth of the way down, I find the following:

"After waiting a couple of hours, a thunder shower came up, and then we set to work in earnest, put the bees in, fastened the covers and bottoms, and laid the hives on the wagon. Two of us, in about an hour and a quarter, prepared 57 colonies in 8-frame dovetailed hives, and set them on the wagon. This would make only about a minute and a quarter for each hive, after the rain set in, so we could close the bees in. We should have been enabled to do it in less time, but the rain poured down so furiously that we could hardly see to work, to say nothing of being dripping wet. Each hive had to be carried quite a distance around a building, under some low-spreading apple trees, and finally we had to crawl over a rail fence before depositing them on the wagon."

Why in the world did they not lay the fence down?

"Now, if these bees had been on loose frames, we should have spent all the afternoon, and more too, in getting the frames stuck up. As it was, we did not even open the hives. We used the same kind of entrance screen as you describe, exactly; and two wire nails held all securely in position......As the frames were fixed—that is, Hoffman—in order to nail the bottom-board on, all we had to do was to turn the hive on its side. Imagine, if you please, the fun of doing this with loose frames. But let me say, I drove no nails until the entrance screens were fastened. Then I had everything my own way.

"After the hives were all on, the load looked very much like that shown in your picture, only the hives were piled up two tiers high, in many cases. Add to this the fact that they weighed on an average from 60 to 75 pounds each, and you will get some idea of the extent of the load. As nearly as I can estimate, there was something over 3,000 pounds weight, including bees, honey and hives. ......As soon as we hitched on the big team, Mike, the bigger one, showed right away that he knew that bees were roaring behind him, and I feared he would not stand much in the way of stings....It was now fast growing dark, and the heavy black clouds gave indications of rain; and an intensely dark night, with seven miles ahead of us, with very bad roads, and one or two railroad cuts that were anything but easy to get over, were not very cheering. I felt considerably nervous, and employed myself in running on top of the load......"

Perhaps I ought to keep still and let the unitiated find out for themselves, *but moving bees* is a particular hobby of mine, and I want to find out all I can about it. In the first place let me do a little figuring. Fifty-seven hives, weight 75 pounds each, would be 4,275 pounds, weight of Mr. E. R., and the driver, probably 300 pounds more, and you have a load of 4,575 pounds net. In addition to this all of these hives were wet, and the wheels of the wagon would pick up 200 or 300 pounds of mud. But taking it at 60 pounds to the hive, would place E. R.'s load at 3,720 pounds.

"As soon as we hitched on the big team, Mike, the bigger one," etc. If you will turn to page 599, of *Gleanings*, July 15, under the text, "A righteous man regardeth the life of his beast," you will find a pretty thorough description of the other big team horse, "old Jack." As he claims that the road was quite hilly, and it had been raining, the hills were no doubt quite slippery.

Another point: He claims that there was no ventilation except at the entrance. I find by actual experience that a colony of bees that are strong enough to be worth anything whatever, at this time of the year, would be completely suffocated without more ventilation. A few bees would crowd themselves into the entrance, and shut off all ventilation. In other words, it is an impossibility to move bees safely without more ventilation, and I think numerous authorities will bear me out in this assertion.

The queries that I wish to see answered are:

1. Is it possible that Mr. E. R. and another man could close up and nail up 57 hives, and carry them "quite a distance around a building under low-spreading apple trees," and then "crawl over a rail fence before depositing them on the wagon," all within an hour and a quarter, and it raining "so furiously that they could hardly see to work, to say nothing of being dripping wet?"

2. With wire-cloth over only the entrance, could full colonies be moved safely, at this time of the year.

3. Is it probable that E. R. would undertake to haul such a load, over such a road, on such a night, with such a team?

4. Could such a team pull such a load, over such a road, on such a night?

Upper Alton, Ills., Sept. 25, 1891.

Yellow Carniolans—Honey-Boards.

D. CHALMERS.

I do not know just what to think about the purity of Mr. Alley's yellow Carniolans. I know that none other had Italian bees in this district but myself when black queens, 5 miles distant, were rearing yellow-banded workers.

I notice that you are annoyed at would-be-inventors taking out patents on useless ideas, and old at that, so you will want something fresh, and perhaps I can give you that.

Solomon was no doubt the wisest man that ever lived, and he said that "there is nothing new under the sun," so you need not expect anything new, but it strikes me forcibly that I can give you something different in the way of a super from any you have ever illustrated or described in the BEE JOURNAL.

What are Mr. Heddon and Dr. Tinker quarreling about queen-excluding honey-boards for? I am not sure but that I could down them both on the first round. Most all who use the disputed board must admit that when it is clogged with wax and propolis, it requires a person with a good Heddon (head on) to be able to clean it off, and then there is a good deal of "Tinker"-ing about it.

I have introduced a new system this Summer, of using the queen-excluding zinc, and at as early a date as possible I propose sending you a super and queen-excluder, with explanations, but I am thinking seriously about patenting the ideas. It was my intention to show them at the Toronto Industrial Exhibition, but time forbade.

Poole, Ont.

Health and Sensible Habits of Life.

K. U. CLARK.

"We live very simply at our house," said a wealthy woman, somewhat affectedly. "We believe in simple living, and I have brought my family up to practice it."

The lady to whom this remark was addressed was interested to observe the "simple living" which was thus complacently described. She knew that almost every one of the ten members of the large family who were said to live thus "simply" had been very ill during the preceding three or four years. They had suffered variously from erysipelas, spinal meningitis, nervous prostration, typhoid and other fevers, and quinsy and diphtheretic sore throats. She did not belive that such diseases could exist where genuine "simple living" was practiced.

She found that the food in this family was very generally fried—that fried oysters, croquettes, Lyonnaise and Saratoga potatoes, griddle cakes and similar dishes, with always hot bread in some form and coffee for all members of the family, from the youngest child, a girl of six, to the father and mother—were the rule for breakfast. She found that cereals were seldom served there. They "hated" them, as was natural for palates accustomed to highly seasoned fried food. Neither was fruit popular there.

She found that the young men and women of the family, even to the school children of from fourteen to eighteen, were in the habit of sitting up until midnight, often later, and then retiring to sleeping rooms which were furnace heated and into which, with one or two honorable exceptions, no breath of the outside air was allowed to penetrate. These exceptions had learned, the mother declared, "cranky" notions while away at college and boarding school. Most of these young people had been obliged to leave school early in life, because their "health" would not permit them to study.

This wealthy and misguided dame is not the only one who imagines that she is "living simply" when she is living after a manner as far as possible removed from that ideal standard. Many a comparatively poor family, too, fancy that they are "living simply" when they are in reality almost as far from it as in the case cited. In fact there seems to be a general lack of understanding in the popular mind as to what "simple living" is. Yet everybody seems to approve of it and to feel that it, and it alone, leads to health and genuine comfort. It is worth while to try and get at a proper definition of a term which seems to be so widely misunderstood.

Undoubtedly our pioneer forefathers enjoyed something akin to the "simple living" which we want. We need to "backslide," after Mr. Ruskin's definition of backsliding. "On the ways most of us go," says that fiery apostle of simplicity, "the faster we slide back, the better. Slide back into the cradle, if going on is to the grave—back, I tell you, back, out of your long faces and into your long clothes."

An old proverb says:

Sunrise, breakfast; sunhigh, dinner;
Sundown, sup, makes a saint of a sinner.

The dwellers in cities cannot well adjust their meals to the simple hours of our forefathers; but they can and should see that their children's meals are thus adjusted; and we can also see that they are of proper food. But what is truly "simple" food?

There are three "simple" modes of cooking. They are baking or roasting, broiling and boiling. Some of the customs and utensils of our estimable forefathers and foremothers, even Mr. Ruskin would hardly advise our "sliding back" to. Among these are frying and the frying pan. The latter should be banished from the modern kitchen, titillating though its products be to the untaught palate.

The simplest form of food is fruit. An abundance of ripe fruit should be supplied to every family, whatever other expense has to be curtailed to procure it. The most uniformly healthful households are those where fruit is judiciously eaten daily.

The simplest form of living is the regular diurnal routine. Old George Herbert says:

Slight those who say amidst their sickly healths,
"Thou liv'st by rule." What doth not so but man?
Houses are built by rule, and commonwealths.
Entice the trusty sun, if that you can,
From his ecliptic line; beckon the sky.
Who lives by rule then keeps good company.

Without being castiron in one's habits, it is possible, and it is the only safe and prudent way, to "live by rule." That means rise, breakfast, dine, sup and retire at as nearly the same hours every day as you can. Cleanse your body both inside and out with regularity. Clothe yourself uniformly at the same season. It is risky in the extreme to go out in furs in the morning and then to drive to an entertainment in the evening with a light opera cloak thrown over bare neck and shoulders.

The simplest form of living is in the open air. Get all the fresh air, therefore, that you can. Go out to walk in it every day. Ventilate every room in your house every morning. Never sleep, unless except in the most bitter weather, without an abundance of fresh air in your chamber. Wear flannel night gowns, night caps and mufflers if necessary, and, while using "comfortables" no more than you are compelled to, do not be afraid to employ plenty of blankets and down quilts. Do not sleep in a draught, unless heroically protected, and do allow heat to radiate from your furnace throughout the house if you want it; but insist upon having in abundance also, that rarest boon of the modern dwelling house, fresh air.

Let your clothing be plain, warm, light and loose. There is no foe to simple living like the clothes fiend. It introduces all sorts of ghastly complications into our modern life. Dress for the weather without regard to the calendar. Refuse to carry, at the behest of a fashionable dressmaker, several pounds more of linings and draperies and jet trimming than you need to. Give every organ of your body room to do its simple duty. A restricted circulation, and vital organs misplaced and tightly pressed by the vicious system of dress now in vogue are at the bottom of two-thirds of the horrible, nameless diseases of women.

The praise of simplicity is in all men's mouths, but, as with many another virtue, its praise and its practice are two very different things. Many have fallen into inconsistency in this regard from ignorance; yet even for those who understand it—that "first step in nature and last in art"—its pursuit, under the unfavorable conditions of modern life, is sufficiently difficult. In "simple living," however, lie the germs of true and and abiding happiness.

Bee-Culture in Southern California.

H. E. HILL.

Southern California presents a condition of apiculture and a class of apiarists generally, as well as a system of non-systematic management, or rather un-management, which the press, though on the alert to report promptly all new discoveries, freaks, etc., connected with our business, have sadly neglected, and I am sure there are many of our Eastern and Northern friends who have no idea of how honey production is carried on in this picturesque land of semi-tropical beauty and apicultural negligence, where the invigorating breeze from the broad Pacific wafts the melodious hum of the busy bee o'er the floral clad hills as they course their way in countless millions in search of nectar, and return laden with their precious burden to the delapidated home of the honey-bee and wax moth, where both seem to revel in the "glorious climate," and each strives for supremacy.

It would seem that all the requirements necessary for the establishment of ideal apicultural enterprises and their successful operation are combined in Southern California, yet I am informed that the deplorable state of affairs prevalent in this section exists throughout the southern part of the State, but can speak personally only of those which I have seen—some ten or twelve apiaries embracing, perhaps, 2,000 colonies of bees, with which I have been brought in contact by the genial courtesy of fellow bee-men, and the business duties of one dependent upon the product of the bee for a livelihood.

If there is one feature which would impress an apiarist from the Eastern States, or Canada, more than another, on visiting Southern California, it would be the entire disregard for order, exactness, or system which characterizes the honey-producers. The study of the honey-bee, its habits, requirements, and improvements which so deeply interest the apiarists of the East, as they strive to fathom the unknown depths of Nature's mysterious sea, and seek to lift our profession to a higher plane among the great industries of the world, is unknown in this portion of California.

The combined satisfaction, pride and interest which a modern apiarist feels as he scans the straight rows of neatly painted hives, with their accurate bee-spaces, perfect combs, and general uniformity of appearances, with a perfect knowledge of each colony's history, and each queen's record from the very day of her advent—all her traits, desirable and otherwise—and all of the interesting study and fascination of modern apiculture, as known and practiced by advanced apiarists of to-day, which renders our avocation fairly remunerative, yet rivaling chemistry in point of interest, is superseded in this section, at least, by an avaricious tumult, much to their detriment financially.

The California bee-man, masked and protected from the Cyprian venom by veil and gloves, with sleeves attached, and an extra shirt or two, generally, and pants tied down to his shoes—not forgetting to put a wisp of alfalfa in the hole in his hat—armed with smoker and "pry" (which is a sort of young crow-bar), marches upon the weather beaten and delapidated habitations of the unfortunate bees, warped out of shape by the powerful rays of the sun, over which is placed a coarse ragged sack, or sacks, beneath a small lumber pile which serves as a roof through which the water pours in miniature cataracts in the rainy season, and runs out of the entrance, if by chance that end happens to be the lower, if not, it usually finds ample room for "exit at the rear," as it courses its way down through the last year's unfinished sections, and through the brood-chamber, seeking its level.

But the masked man, with the burglar's "kit ?" See ! he advances slowly, but with resolute step and contracted brow, expressive of a strong determination to expose its most interior workings to the light of heaven. Nearer, yet nearer, and the awful scene is obscured in a dense cloud of smoke, but he still presists in his premeditated and merciless onslaught, smoking the bunch of bees behind the hive(?), which arrest the direct rays of the sun which would strike the combs, then the little clusters underneath, guarding the cracks and holes from intrusion by robbers, lizards, mice, etc., and the several other little bunches and clusters which serve as a "chink" in the wall, he unpiles the lumber, thus temporarily destroying the peaceful habitation of many moth millers, and the numerous promising and fat worms are rendered homeless and destitute forever.

As the propalo—sack cloth—is torn from the frames of various widths and sizes, and the alarmed inmates fly into the air, he places the pry in position and prys the end of the hive off a little to relieve the friction of the end-bars of the longer frames, and not infrequently succeeds in extracting a frame which he scans carefully, replaces it, puts on the rags and lumber, upon which he places a stone and two handfuls of earth (which I learned denoted "laying worker") and, reminded by the case in hand, proceeds to examine the several others bearing the stone and two piles of sand, which he had placed there two or three weeks previously when he had "no time to monkey with them," to see if they still have a laying worker.

I will here state for the benefit of those not familiar with the record system in vogue in Southern California, that one stone means "wants attention," two stones, "wants attention badly," three stones, "wants attention *very badly*," and so on, the more rocks the more it needs attention. One stone and one handful of sand (or mud, according to the weather) signifies "queenless," and if a hive gets a stone and one pile of earth early in the season, it is likely to remain there all Summer, for bee-men in this section "have no time to fool," but when the condition of the colony demands it, the one stone and one sand pile are superseded by two of each.

I also have the honor of presenting to the world another feature in honey production which has heretofore never been made public, relating to comb-honey, and which I have named the "expansion method." I do not know how long it has been in use, nor how extensively it is practiced. However, be that as it may, I have noticed an apiary of more than a hundred colonies, this season, being managed in this way, but owing, perhaps, to a partial failure of the honey crop of California, the result was not what it might have been.

The *modus operandi* was as follows: Being in need of combs to "upper story" some hives run for extracted-honey, the supers were removed from the comb-honey hives, and two or three combs of honey taken out, and frames with foundation starters put in their stead, and the sections replaced upon the hives.

I wish to caution beginners against attempting this plan. It is intended only for the advanced class of apiarists, and only such should attempt having combs for "upper storying" built below partly finished sections during a slow flow.

An apiary of 160 colonies was given into my charge after the swarming season had opened and honey was flowing, out of which 30 were queenless, of 12 of which laying workers had possession, and the remainder of the apiary corresponded beautifully with these 30 colonies. All being in hives which I consider an embodiment of all the ills that ever afflicted a bee-hive.

Notwithstanding the opinion of many apiarists that "it matters but little what kind of a hive we use," I consider the question of hives, to one starting in the honey-producing business, of vital importance; and my advice to beginners, after 9 years' experience, with perhaps hundreds of hives, in various climates, from the Georgian Bay to the Carribean Sea, and from the Atlantic to the Pacific, would be: Do not invest in hives until you have learned *positively* what the requirements are, and then adhere strictly to that which fulfills these requirements. In bee-hives, as with everything else, there is a *right* kind (different styles that are *right*), but there are many styles that are the opposite, or *wrong*, and a hive that is wrong, robs the business of all pleasure or satisfaction.

But this letter was not intended to discuss hives, and for lack of space I will defer further remarks until a future time, but in conclusion, would ask why is this slipshod, semi-barbarous condition of affairs tolerated by so many California producers, many of whom are Eastern men that would not endure such crude, awkward, wasteful sights, for a single day, in the East, yet here, they smile and apologize by saying, "Oh, that is California style."

I saw no better specimens of old-fashioned, simon-pure "bee-bungling" among the negroes of the West Indies than I have seen in Southern California, by men who own hundreds, and some thousands of colonies, in movable-frame hives.

Redlands, Calif.

Be Sure They are Carniolan Bees.

J. A. GREEN.

The editorial comments on Mr. Andrews' article, on page 400, would seem to indicate a belief in the genuineness of the golden Carniolans. If this belief is well founded, the breeders of these bees are much maligned individuals, and the scores of prominent apiarists who ridicule their claims should be labored with in order that justice may be done. On the other hand, if these queen-breeders are wrong, and their opponents right, justice to the public demands that the facts should be as quickly and widely made known as possible. This I trust will be sufficient excuse for a continuation of the discussion.

If the Carniolans are better than the bees we have had before, we want them. If they are inferior, let us discard them. But whatever they are, let them stand or fall on their own merits, and when we are testing them, let us be sure they are Carniolans, and not something else.

Mr. Alley claims, on page 330, that "*The Carniolan race of bees are the original yellow bees*," and in the article containing this statement, and elsewhere, he argues that the Carniolan race has a natural tendency to become yellow.

If this were true, as has before been pointed out, they would long ago have become a yellow race in their native land; whereas, Mr. Alley himself testifies that the progeny of imported queens showed no yellow whatever. The variation does not begin, as he admits, until we come to the progeny of queens reared in his own apiary.

The explanation of this is furnished by Mr. Alley himself, when he tells us that these queens were mated in an apiary but little over a mile away from a large apiary of Italians. Now, it is agreed by most authorities that the meeting between queen and drone may take place at some distance—a mile or more—from the hives. If they flew only a mile away, apiaries would need to be at least two miles apart to keep them distinct. I have evidence which I consider conclusive that different races will intermix if kept *four* miles apart. More than this, I believe—and this belief is shared by many—that a queen is more liable to be mated with a drone from an apiary a mile away than from the one in which she was reared.

At a time when all my bees were Italians, and no other bees were within a mile—except possibly a few in the woods—and even at that distance there were not over one-tenth as many as I had, a large proportion of my queens were mated with black drones. When I establish an apiary in a new place, although my Italian bees far outnumber all bees within several miles, experience shows me that nearly half the queens reared there will produce hybrids.

On the other hand, the common bees have become so mixed with the Italians, that in this part of the State it is difficult to find a colony of pure black bees.

To sum the matter up, the "golden Carniolans" have been produced by crossing Carniolans with Italians, then breeding for yellow bees.

They may be very good bees. Probably they are, as the greater share of their ancestry (the Italian side) are known to be, while the remaining share certainly has some good points. But to cross Carniolans with Italians, and then breed out as much of the Carniolan blood as possible, is hardly the way to produce "typical Carniolans." Let those who wish to test the "wonderful Punic bees" get them before the striped variety makes its appearance. It is all very well to test new varieties of bees, but let us call things by their right names.

Dayton, Ills.

[The editorial comment, on page 400, expressed no opinion on the controversy. It quoted Mr. Alley's language on page 330 only to show that he had already answered the question again propounded by Mr. Andrews. This was done to save space for a reply, and *not* to endorse any view presented by either party. Our own views do not materially differ from those of Mr. Green.—Ed.]

Bee-Keeping in Alabama.

JOHN M. RYAN.

My crop of honey, to date, will amount to about 1,337 pounds from 22 colonies. Two other colonies have stored no surplus, so far, but from one of them I expect to get about 30 or 35 pounds by the last of October, when aster bloom ceases. Two colonies stored 85 pounds.

There were but 4 swarms cast in my apiary this season, 3 of which I hived, but the fourth one issued during my absence, and clustered so high that my wife and son could not reach them, and before my return they took flight.

In 1888 I secured 568½ pounds of honey from 19 colonies, and the honey-dew was more plentiful that year than it has been this year. My crop that year was cut short by the queens laying in the sections, and I have had some trouble from the same source this year, and had it not been for that my crop would probably have been larger by about 150 pounds.

I regret very much not having some sourwood honey to send to the State Fair, which commences on Oct. 20, at Birmingham.

The lindens began to bloom about June 21, and continued in bloom until July 15.

The poplar bloom which began on April 27, yielded nectar profusely in the mountains, but in the valleys the yield was much less.

Some Italian bees have been brought into the mountains 8 miles south of my place. They are in the timber, and will supersede the black bees.

Our roadsides are golden with the bloom of Fall weeds, on which the bees are working. Smart-weed is also in bloom, and bees are working on it in the morning. I seldom see the bees working on golden-rod.

Apple Grove, Ala., Sept. 12, 1891.

Honey-Dew or Bug-Juice.

OLIVER FOSTER.

No one who has read the BEE JOURNAL can doubt the sincerity of its editor in his fearless defense of the rights of bee-keepers, and in his efficient services for the promotion of their interests.

The readers of a periodical are sometimes responsible, however, for the best application of the editor's efforts in their behalf. The severe condemnation of honey-dew or "bug-juice," and those who sell it for honey, are applicable to some specimens of that article I have seen, but not to all.

The nectar produced by aphides in this section this season is of very fair quality. It sells readily in our retail markets at 5 cents for extracted, and 8 cents for comb, while the best white clover and linden honey sells at 8 cents for extracted, and 15 cents for comb. While some do not like the honey-dew (and I include myself in the number), I find many who do, and some who *prefer* it to white clover or basswood honey, among whom are people of refined tastes, such as our postmaster, our railroad agent, etc.

My largest sales are to those who have used it, and order it the second and third times. It has shown a remarkable medicinal value in promptly curing a severe case of throat and lung trouble of long standing. I call it honey-dew, and explain its source only when asked to do so. A proper explanation will not change the attitude of a fair and reasonable mind.

As for appropriateness of names, I think the term "dew" is more appropriate for this kind of nectar than it is for that which exudes from the plants, since dew is *always deposited—it never exudes.*

To my mind, it would be as elegant, as appropriate, and as near correct to use the term "cow-juice" when speaking of milk, as it is to call the natural secretion of the glands of the aphis, "bug-juice."

Mt. Vernon, Iowa.

[We admit that there are different qualities of so-called honey-dew, and that even the bug-juice varies in kind, but for all that it is *not* honey, and should never be sold for honey.

Milk is a natural product, common to animals, including humanity. As it is in no sense exclusively a product of the cow, it would be sheer nonsense to call it "cow-juice!" There is no similarity between the two terms. The secretions of the aphidæ are neither honey nor dew, no matter how often, nor by whom they are so called.—ED.]

Haldimand Bee-Keepers' Convention.

F. A. ROSE.

The Haldimand Bee-Keepers' Association met in the new High School building, at Hagersville, Aug. 29, 1891.

Meeting called to order by the President. The Secretary being absent, Mr. F. A. Rose was elected Secretary *pro tem.*

The attendance was not large, owing, no doubt, to the poor season.

Reports of 16 persons present were as follows: Bees—466 colonies in the Spring; increase 22; honey—7,530 pounds of extracted, and 880 pounds in the comb.

HOW TO PREPARE BEES FOR WINTER

was the first subject. Out-door wintering was preferred by all present.

Mr. Kindree thought that plenty of bees, a good prolific young queen, and plenty of good stores was the main thing.

Mr. Armstrong concurred in what the others said, and said that a box that would keep out water, and large enough to admit of 6 inches of packing all around, was necessary.

Mr. High—Is it necessary to have packing under the hive?

Mr. Armstrong—Yes, as it keeps the bottom dry, and, of course, warmer.

SPRAYING FRUIT TREES

was discussed at some length. It was thought best to try to convince fruit-growers that they were injuring themselves, and not injuring the codling moth in the least, if they sprayed in full bloom. Some members said it was yet an open question whether bees were ever injured by spraying fruit trees in full bloom. In support of this Mr. Armstrong read an extract from a letter published in *Gleanings* by Mr. Ashby, of New York.

QUESTION BOX.

Has any one succeeded in getting a strain of bees better workers on red clover than the black bee?

Mr. Armstrong thought not, as bees would gather honey where they could get it the easiest, and none of them would work on it when there was plenty of alsike or white clover, and all worked alike on red clover sometimes when there was little or no nectar to be got anywhere else.

Those appointed to attend the meetings of the agricultural societies in the county report favorably, and good prizes will be offered at Jarvis, Cayuga, Dunnville and Rainham Centre.

A vote of thanks was tendered the trustees of the school.

The next meeting to be held at Cayuga on the last Saturday in January, 1892, at 10 o'clock a.m.

Central Canada Fair at Ottawa.

R. F. HOLTERMANN.

The exhibit of honey and apiarian supplies, while not nearly so extensive as at Toronto, is very good, the number of competitors in some sections being as high as five.

The quality of comb-honey is hardly up to Toronto, and the quality of extracted-honey is decidedly better—in fact, it would be difficult to beat it.

Mr. Alford has the largest display of extracted-honey, and right here I would say that it is seldom that one meets an exhibitor so universally courteous as Mr. Alford. He lives close to the exhibition grounds, and appears to consider it his special business to see that all of the other exhibitors are helped in every way possible. He will even render assistance when it appears to be detrimental to his own interests. Mr. Alford has about 50 colonies, largely Italians and hybrids.

The award of prizes is as follows:

Display of comb-honey—First prize, E. L. Goold & Co., Brantford; second, Wm. Alford, Ottawa.

Display of comb-honey by a lady—First, Misses R. and H. Alford, Ottawa; second, Miss H. F. Buller, Campbellford.

Display of extracted-honey in marketable shape—First, Wm. Alford; second, E. L. Goold & Co.

Display of extracted-honey by a lady—First, Misses R. and H. Alford; second, Miss H. F. Buller.

Colony of bees, properly named—First, Wm. Alford.

Display of queens—First, Wm. Alford.

Beeswax—First, E. L. Goold & Co.; second, Miss H. F. Buller; third, Wm. Alford.

Comb-foundation for surplus—First, E. L. Goold & Co.; second, Wm. Alford.

Comb-foundation for brood-chambers—First, E. L. Goold & Co.; second, Wm. Alford.

Honey vinegar—First, Misses R. and H. Alford; second, W. L. Alford; third, Miss H. F. Buller.

Bee-Keepers' supplies—E. L. Goold & Co., Brantford.

The article which deserves special mention is honey vinegar; the entire three lots taking a prize are exceptionally fine. Miss H. F. Buller has heretofore usually taken the prize for honey vinegar. Owing to the illness of Miss Buller's mother, that lady was unable to attend the exhibition herself.

Ottawa and the surrounding country, especially Quebec Province, is noted for having no bee-keepers' associations, and the number of bee-keepers having the old box or straw hive system.

Brantford, Ont.

Exhibiting a Colony of Bumble-Bees.

A. C. DOWNING.

On page 374 I notice an article on "Bees and Honey at the County Fair." I made an exhibit at our county fair this year, such as I never heard of before, and that was a colony of bumble-bees in an observatory hive, which attracted a great deal of attention. On April 1, 1891, I put the queen bumble-bee in a box with a glass sides, and covered it with a shingle. She laid her eggs, and soon reared a colony, which built their comb against the glass where it could be seen when the shingle was removed. This box I exhibited in a glass case, so that the bees could go in and out. I fed them in the outer case.

The colony starts from a queen in the Spring. She makes her living, builds her nest, prepares 5 or 6 cups, lays eggs in them, and feeds the larvæ until mature; then these workers gather the honey, and the queen remains in the nest and lays eggs. As with the honey-bee, there are three classes—queens, drones and workers. In August the first drones appear, and in the latter part of the same month the young queens appear in great numbers. They all hatch out about the same time, fly out to meet the drones, become fertile, and the nest breaks up. The young queens burrow in the ground to spend the Winter, and the drones and workers loaf around until cold weather, and then die. While I had these bees caged, I witnessed the process of mating in the cage, and I think that there is a point that we will accomplish with the honey-bee before many years.

This has been the poorest season for honey that I ever knew in this locality.

Lexington, Ky.

Lack of Sweetness—Cold Winter.

MRS. L. HARRISON.

What has become of it? Sweet corn is a misnomer this year, for it lacks sweetness—it is insipid. Peaches are abundant, large and juicy, but lack sweetness. Is it to be wondered at, then, that flowers secrete no nectar from the earth, air or sunshine? Moisture there has been in abundance, and nothing lacking but heat. Then hot sunshine must be the requisite to produce sweetness. Or is it the lack of zero weather last Winter? The heat and cold were badly mixed; the warm weather during the past Winter was repaid during this Summer with cool. Some weather prophets predict a severe season ahead, and let us take warning and be ready to meet it half way.

COLD WINTER.

Bees are tiny creatures, and are not provided with blankets and overcoats; therefore, their owners should look after their comfort. There has been much said about the cruelty of destroying bees with sulphur fumes, and little about those who let them shiver for months, and finally yield to the inevitable. Which is the more humane?

Good, strong colonies of bees, with plenty of well ripened stores, can come through zero weather with colors flying, provided they are kept dry. This may appear, at first glance, to be an easy matter, with a tight roof over their heads, but the danger is not from outside, but moisture from within. During very cold weather bees consume large quantities of honey in order to generate heat, and the moisture passes off in vapor through breathing holes in their bodies.

If the air surrounding the cluster is very cold, this vapor congeals above and around them, and will do no harm as long as the cold continues, but let a thaw come on and the bees will be in a sad plight; should the weather turn suddenly cold the cluster will be frozen solid. Bee-keepers have been experimenting along this line—how to prevent dampness during cold weather—for many years.

Where a colony is known to have a young, vigorous queen and plenty of bees, they need no attention at present, unless they have but little honey, and even then I would not feed until frost had killed the flowers, for I have known large colonies to fill their hives during the last ten days of grace preceding frost. But all small colonies should be doubled up, as I have stated in previous articles.

I laid down my pen just now and went into the apiary and opened a hive. O, dear me! I had forgotten that it hurt so to be stung. As long as I do not disturb a hive no one is ever stung, although there are more than 100 colonies in close proximity to the house. There has been so little honey all Summer that when a colony is disturbed the bees seem to think that they must defend their *all* at the risk of losing their lives and care naught for smoke.

This morning I was requested to stand in the shade and look up at the sky. I soon saw the reason why. The bees were darting in quick succession in the direction of the river bottom; it almost seemed as though there would not be a bee left in the apiary. If this rush for the river bottom continues many days, we feel assured that we shall have to feed but little for Winter.—*Prairie Farmer.*

Peoria, Ills.

Mary Maud McCracken, of Topeka, Kans., who advertised last season to send pure Italian queens, warranted and tested, for $2, turns out to be a fraud. She is a young girl, and never owned a bee. Bee-periodicals are welcome to this information.—*Field and Farm.*

We never saw the advertisement, but presume it was in some of the agricultural periodicals.

Clubs of 5 New Subscriptions for $4.00, to any addresses. Ten for $7.50.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Oct. 7, 8.—Missouri State, at Sedalia, Mo.
J. W. Rouse, Sec., Mexico, Mo.

Oct. 10.—Capital, at Springfield, Ills.
C. E. Yocom, Sec., Sherman, Ills.

Oct. 14, 15.—S. W. Wisconsin, at Fennimore, Wis.
Benj. E. Rice, Sec., Boscobel, Wis.

Nov. 19, 20.—Northwestern, at Chicago, Ills.
W. Z. Hutchinson, Sec., Flint, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

North American Bee-Keepers' Association

President—P. H. Elwood....Starkville, N. Y
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y and Manager—T. G. Newman, Chicago.

Bee and Honey Gossip.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Three Poor Crops in Six Years.

This is my sixth year as specialist in the bee-business, and during that time I have had two small crops of honey-dew, or bug-juice, and one poor crop of white honey. Every pound of my honey has cost 50 cents, and now my bees are starving. J. E. Walker.

Clarksville, Mo., Sept. 25, 1891.

An Unprofitable Season.

Bee-keeping in this section has not been a paying investment this season, but we live in hopes, and I am getting ready for a good season next year. One thing that kept us back was the exceedingly early rains. J. B. Ramage.

Blaine, Wash., Sept. 22, 1891.

Poor Year for Honey.

This has been one of the poorest years for honey in a long time. I own one colony of bees, but got no surplus. A great many farmers in this vicinity have from 3 to 30 colonies, but got no surplus, either extracted or comb-honey. I think the reason of it was that they took no bee-periodical. I believe bees ought to refuse to gather honey for a man who neglects to subscribe for a periodical, such as the American Bee Journal.

Gee W. Richards.

Manorville, Pa.

No Dark Honey.

I had 44 colonies of bees, Spring count, which increased to 76 colonies, and gave me 2,000 pounds of comb-honey, and 6 or 7 pounds of extracted-honey, all of which was from basswood—not a pound of dark honey in the lot. I shall unite them down to about 60 colonies for Winter. Geo. H. Auringer.

Bonniwell's Mills, Minn.

Another Poor Year.

I left Geneseo last Spring and came to Mendota, changing my occupation from farming to poultry buying. I must say that I miss my little pets a great deal, although I left them in good care in the hands of my brothers, who are getting along nicely with them, as I noticed while at home on a visit a few days since. This has been another "off" year for the bees, the Summer being so cool that there was but little nectar formed in the flowers. The present warm weather, however, is good for the bees, as they are storing a little honey now. I shall have some surplus to take off, and, judging from the present outlook, my bees will go into Winter quarters with plenty of stores.

Geo. Frey.

Mendota, Ills., Sept. 25, 1891.

Wavelets of News.

The Honey Crop in Iowa.

If it were not for the divine gift, hope, bee-keepers would give up in discouragement, if not in disgust, after a couple of years of failure.

> Hope springs eternal in the human breast,
> Man never is but always to be blest.

Last year being a poor one for honey over a large portion of the country, they cheered themselves on by the thought that this would be more propitious. Well, it has, but still the yield has been below the point of profit for the man who makes bee-keeping his chief business.

Those who argue that it is best to combine bee-keeping with some other employment certainly have the best of the argument when flowers refuse to distill their accustomed sweetness for the bees.

So far as I have been able to learn, there is not half a crop of honey in Iowa, and much of that is not first quality.

In the immediate locality of the writer, however, the honey we did get is very good. Where the bees were early supplied with supers, the increase has not been large and the average yield of comb-honey will not exceed 20 pounds per colony.

There was no Fall honey in this part of Iowa. Neither golden-rod nor asters yielded this year.—EUGENE SECOR, in the *Farmer and Breeder*.

Punic Bees.

I wrote to my brother, who lives near Sheffield, Eng., to make inquiries about them, and he writes me some very strange things in reference to the Punic bees. He assures me that the whole thing is a farce, that they are nothing but small black bees, have no wonderful traits, and that the best bee-keepers of England wonder why Americans are so gullible.—W. JOHNSON, in the *Canadian Bee Journal*.

Carniolan Bees.

The breed is by no means a new one. I had it in the apiary nearly ten years ago, and then found their tendency to swarm so great that I have never allowed the least trace of Carniolan blood to remain in the apiary, and have done all in my power to prevent others from introducing it. They are gentle, but when the bee-keeper is doing everything he can to prevent swarming, the introduction of such a bee must hinder his object.

Again, every experienced bee-keeper knows one of the necessary requisites to securing a good honey yield is a strong colony. Excessive swarming prevents colonies and the result must be a crop of bees instead of a crop of honey.—R. F. HOLTERMANN, in the *Montreal Witness*.

How Fast Can Bees Fly?

It depends on circumstances. In cold weather bees cannot fly as rapidly as in warm weather. Wind retards their progress, but if the air is calm and the weather warm enough, bees can, we think, fly 60 to 100 miles an hour.

When we were returning from Palestine and Cyprus with a large number of small colonies of bees, we were told that the train ran at a speed of over 60 miles an hour from Brighton to London. As some of the colonies had plenty of bees and to spare, we thought we would test them, and see if they could fly as quickly as the train was running. We let a bee out occasionally to see what the result would be, and they would fly and keep up with the train for miles and miles. Several gentlemen who were very much interested in the experiment, watched with us, and were surprised at the rapidity of the little insects.—D. A. JONES, in the *Canadian Bee Journal*.

Welcome in Different Countries.

A couple of Americans meet, grab each other's hands, and you wonder how much water they have contracted to pump in five minutes. An Englishman nears a friend and they pound each other on the shoulder, while you look on nervously, wondering who will draw first blood. Frenchmen meet, and they fall to kissing each other, while you go off in a corner and feel sick. Italians fall into convulsions, while you are hunting for the doctor. The Portuguese hook their chins over each other's shoulders, as if they wanted to find which pocket holds the handkerchief, while Spaniards hug each other with tears streaming down their faces, leaving you in doubt as to who has died; but the Arab, when he meets his friend, advances toward him, they join hands in firm pressure for just a moment, and then, without a grimace or movement of the lips, raise their own hand and touch it to their lips, saying afterward: "Welcome sight." The whole thing is done with dignity that is thoroughly manly, and yet with a hint of tenderness that is nothing less than beautiful.—*Boston Transcript*.

The Executive Committee have fixed the date of the next session of the North American Bee-Keepers' Association, Dec. 8 to 11, at Albany. There will be an informal meeting on the evening of Tuesday, Dec. 8, for getting acquainted, etc. The real work of the convention will commence Wednesday morning, and extend through two full days, ending Friday morning, giving distant delegates time to get home before Sunday. We want all to get there if possible on Tuesday. If they have a few hours of daylight it will give an opportunity to look around the city, view the capitol building, etc. Reduced rates have already been secured in all trunk-line territory, and the same is expected over other railroads. The programme is now under way, and other arrangements are nearly completed. If you have decided to take a vacation that will, we trust, be profitable, don't fail to attend this convention.

P. H. ELWOOD, Pres., Starkville, N. Y.
C. P. DADANT, Sec., Hamilton, Ills.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

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Advertisements intended for next week must reach this office by Saturday of this week.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to pay for another year.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. It costs:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The 7 above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75
Orange Judd Farmer	2 00	1 75
Farm, Field and Stockman	2 00	1 75
Prairie Farmer	2 00	1 75
Illustrated Home Journal	1 50	1 35
American Garden	2 50	2 00
Rural New Yorker	2 50	2 00
Nebraska Bee-Keeper	1 50	1 35

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

◆

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

◆

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

◆

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00. For sale at this office.

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this Journal, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

The Bee-Keepers' Directory, by Henry Alley, Wenham, Mass. It contains his method for rearing queens in full colonies, while a fertile queen has possession of the combs. Price by mail, 50 cents.

Binders made especially for the Bee Journal for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the Bee Journal (with $1.00 to pay for the same), or 2 subscribers to the Home Journal may be sent instead of one for the Bee Journal.

YOU NEED an Apiary Register, and should keep it posted up, so as to be able to know all about any colony of bees in your yard at a moment's notice. It devotes two pages to every colony. You can get one large enough for 50 colonies for a dollar, bound in full leather and postage paid. Send for one before you forget it, and put it to a good use. Let it contain all that you will want to know about your bees—including a cash account. We will send you one large enough for 100 colonies for $1.25; or for 200 colonies for $1.50. *Order one now.*

Please send us the names of your neighbors who keep bees, and we will send them sample copies of the Bee Journal. Then please call upon them and get them to subscribe with you.

☞ The sewing machine I got of you still gives excellent satisfaction—W. J Patterson, Sullivan, Ills.

When Writing a letter be sure to sign it. Too often we get letters with the name of the post-office, but no County or State. One such came recently, and we looked into the Postal Guide and found there were places by that name in 13 States. That order for goods will have to wait until another letter comes to give the proper address. Be sure to stamp your letter, or it may go to the dead letter office.

Pleasant Employment at Good Pay. —The publishers of Seed-Time and Harvest, an old established monthly, determined to greatly increase their subscription lists, will employ a number of active agents for the ensuing six months at $50.00 per month or more if their services warrant it. To insure active work an additional cash prize of $100 will be awarded the agent who obtains the largest number of subscribers. "The early bird gets the worm." Send four silver dimes, or twenty 2-cent stamps with your application, stating your age and territory desired, naming some prominent business man as reference as to your capabilities, and we will give you a trial. The 40 cents pays your own subscription and you will receive full particulars. Address

SEED-TIME AND HARVEST,
10A8t La Plume, Pa.

HONEY AND BEESWAX MARKET.

NEW YORK, Oct. 2.—Comb-honey is now arriving. Extracted in good supply, with limited demand. We quote: Comb, fancy white, 1-lb., 15@16c; 2-lb., 13@14c; fair white, 1-lb., 13@14c; 2-lb., 12c. Extracted—California, basswood and orange bloom, 7@7½c; common Southern, 65@70c ℔ gal.; choice, 70@75c. Beeswax, dull, 25@26c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, Oct. 3.—The demand is steady and supply light. We quote: White comb, 15@16c; dark, 10@12c. Extracted, white, 7@7½c; dark, 5@6c. Beeswax, in light supply and good demand, at 23@26c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Oct. 3.—The demand is good, with fair supply. We quote: Choice comb, 14@16c. Extracted, 5@8c. Beeswax is in fair demand and good supply, at 23@25c for good to choice yellow.
C. F. MUTH & SON,
Cor. Freeman & Central Aves.

NEW YORK, Oct. 2.—The demand for honey is increasing, but is exceeded by supply. We quote: Fancy 1-lb. comb, 15@16c; 2-℔., 14c; fair, 1℔., 13@14c; 2-℔., 13c. Extracted—California, 7c; clover and basswood, 7@7½c. Beeswax—in fair demand, with adequate supply, at 25@27c.
CHAS. ISRAEL & BROS., 110 Hudson St.

CHICAGO, Oct. 3.—The demand is active for white comb-honey; supply limited. We quote: Fancy, 16c; other grades 14@15c. Extracted, 7@8c. Beeswax, quick sale, at 26@27c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Oct. 3.—Demand for honey good, with light supply. We quote: Comb—1-lb. white, 16c; dark, 12c; 2-lb. white, 15c; dark, 10c. Extracted—white, 7@7½c; dark, 5@6c. Beeswax, supply and demand light, at 25@27c.
HAMBLIN & BEARSS, 514 Walnut St.

DETROIT, Oct. 3.—The demand for comb-honey is fair and supply small. We quote: Comb, 12@13c; extracted, 7@8c. Beeswax in good supply, and light demand, at 25@26c.
M. H. HUNT, Bell Branch, Mich.

CHICAGO, Oct. 3.—The demand is slow for 1-℔. comb-honey, with good supply. We quote: Choice white comb, 14@16c. Extracted, 6@8c. Beeswax, in light supply, and demand slow, at 27c. J. A. LAMON, 44-46 S. Water St.

ALBANY, N. Y., Oct. 2.—Demand is improving; supply moderate. We quote: White comb, 12@17c. Extracted, 6@8c. Beeswax, scarce and in good demand at 26@28c.
H. R. WRIGHT, 326-328 Broadway.

NEW YORK, Oct. 2.—Demand good, with fair supply. We quote: No. 1 comb, 16c; No. 2, 13@14c. Extracted—California, 7@7¼c; basswood, 7¼@8c; Southern, 65@70c per gal. Beeswax, supply and demand fair, 26½@27c.
F. G. STROHMEYER & CO., 122 Water St.

SAN FRANCISCO, Oct. 1.—Demand good, supply small. We quote: Comb, 1-lb., 10@13c. Extracted, 5¾@6c. Beeswax, in light supply and good demand, at 24@25c.
SCHACHT, LEMCKE & STEINER,
16 Drumm Street.

CHICAGO, Oct. 3.—Demand is now good, supply is not heavy. We quote: Comb, best grades, 15@16c. Extracted, 6@8c. Beeswax, 26@27c.
R. A. BURNETT, 161 S. Water St.

BOSTON, Oct. 2.—The demand good, supply ample. We quote: 1-℔. fancy white comb, 15@16c; extracted, 7@9c. Beeswax, none in market.
BLAKE & RIPLEY, 57 Chatham St.

NEW YORK, Oct. 2.—Demand is active, and supply increasing by large arrivals. We quote: Fancy 1-lb. comb, 14@17c, depending on quality; 2-℔. sections, 2c less. Extracted—White clover and basswood, 6@8c, and supply not equal to the demand. Beeswax—the supply is not equal to the demand, which is brisk, at 26@29c, as to quality.
F. I. SAGE & SON, 183 Reade St.

Premium.—Every tenth subscriber to the HOME JOURNAL who sends a correct solution of the rebus, receives a cash premium as soon as it is received. Here is an acknowledgement of one received on Sept. 30. The check was sent by return mail:

Yours of Sept. 30, enclosing your check for $5 was received last evening. Many thanks for the same, as well as for the remarkable promptness with which you sent it.—MRS. EVA GAILLARD, Girard, Pa.

Red Labels are quite attractive for Pails which hold from 1 to 10 lbs. of honey. Price, $1.00 per hundred, with name and address printed. Sample free.

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms.

☞ The Union or Family Scale has been received, and I am much pleased with it. W. H. KIMBALL.
Davenport, Iowa.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line,** for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

WANTED—To exchange Bees for Barnes Saw, complete. Address
15A2t A. G. BALDWIN, DeKalb, Ills.

WANTED—TO SELL—A 40-acre fruit and honey farm; good market; no failure in six years' experience. For full particulars write to H. C. WILLIAMS, Marshall, Saline Co., Mo. 13A5t

ONE COLONY Saved from Death the Coming Winter Would Repay the cost of a copy of "ADVANCED BEE CULTURE" ten Times Over. In 5 of its 32 Chapters may be Found the Best That is Known upon Wintering Bees. It costs 50 cents but its Perusal may Make you $50 Richer next Spring. The "REVIEW" and this Book for $1.25. If not Acquainted with the "REVIEW," send for Samples. W. Z. HUTCHINSON, Flint, Michigan.

9Dtf *Mention the American Bee Journal.*

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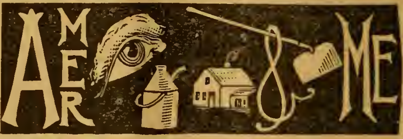

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THOMAS G. NEWMAN,
EDITOR.

Vol. XXVIII. Oct. 15, 1891. No. 16.

Editorial Buzzings.

Too True! life's shores are shifting,
Every year;
And we are seaward drifting,
Every year;
Old places, changing, fret us,
The living more forget us,
There are fewer to regret us,
Every year.
—T. S. PARVIN.

◆

Beware of people who do not love children and flowers.

◆

In Colorado there is an abundant honey-flow, the bees work eight months out of the year, and gather the finest honey in the world, says the *Field and Farm.*

◆

Rain by contract is the latest. The telegraphic reports in the daily papers of last Monday, are to the effect that the citizens of Goodland, Kan., have made a contract with Melbourne, the Ohio rain-maker, to produce rain in June, July and August, 1892, at 10 cents per acre.

◆

Every good man builds his own monuments.

◆

Dry Cedar bark is said to be good fuel for smokers, when pounded fine.

◆

If You Have any honey to sell, get some Honey Almanacs and scatter in your locality. They will sell it all in a very short time.

◆

Capt. G. R. Cooper, of Van Alystyne, Tex., says he will probably get 7,000 pounds of extracted-honey this year.

◆

Charles Garrett, of Hot Springs, Ark., will exhibit at the World's Fair his extensive collection of mineralogical specimens, including the famous Hot Springs diamonds.

◆

The North American Bee-Keepers' Convention will be held at Albany, N. Y., Dec. 8 to 11. Reduced rates on all the trunk line railroads are secured. Read the notice on page 500.

◆

An Automatic Smoker has been invented by the French apiculturist, M. de Layens, which is said to give good satisfaction. Costs 14 francs. This is a "stray straw" from *Gleanings.*

◆

Keep Posted.—With regard to the importance of reading bee-literature, the Rev. J. Carswell, of Bond Head, Canada, says: "In my own experience, I have often obtained from one article, information far more valuable, and that led to a financial gain far in excess of the cost of a bee-periodical. During the eleven years I have kept bees, I have been a constant reader of bee-periodicals, and attribute any little success I have had, very largely to the information obtained from this source. I can, therefore, strongly recommend every one who has bees, or intends to keep them, to subscribe for a bee-periodical."

The Wintering Problem in Bee-Keeping; an Exposition of the Conditions Essential to Success in the Winter and Spring Management of the Apiary, by G. R. Pierce. This is the title of a new pamphlet of 77 pages, just issued by the author, who has had 25 years' experience in bee-keeping, and for the past 5 years has devoted all his time and energies to the pursuit. In a private letter the author says:

> Since 1880 I have been engaged, during the Winter season, in experimenting with a view to determining the cause of Winter mortality in the apiary.

The work is well written in an interesting manner. In fact, we were so much interested in it, that after commencing at the "Preface," we could not be induced to stop until we arrived at "the end." To us it was far more interesting than a novel.

The author objects to the Pollen Theory, but maintains that poor honey, honey mixed with vinegar, or even the so-called honey-dew, will be safe for Winter food for bees, if they "seal" it over in the same manner as they do the honey gathered from flowers. He thinks hibernation imaginary, and ventilation and absorbents quite unnecessary.

He details repeated tests with 5 colonies of bees, covering a period of six years. He avers that it is the position and sealing of the stores rather than the ingredient that is all-important. His experiments with sugar syrup and pollen are quite interesting.

Bee-diarrhea, he contends, "is simply a cold—intestinal catarrh—and will soon disappear, if nothing is present to irritate the intestines while they are in a sensitive and inflamed condition." Pollen intensifies the disease, but is in no way its cause. The cause is the "combined influence of cold, and lack of food."

The book is copyrighted, or we would give our readers one whole chapter with its illustration. The price is 50 cents, and the book is well worth it.

J. M. Young, of Plattsmouth, Nebr., has been interviewed by a reporter of the *Herald*. Of course, the reporter got things "mixed" somewhat, but he wrote one-half of a column about Mr. Young's apiary and honey, and says:

> Having often heard of the successful bee-farm of Mr. Jasper Young, who resides in the edge of the timber east of the new fair grounds, a *Herald* reporter was detailed to visit Mr. Young. His bees were nicely located in a natural grove near the house, consisting of 85 colonies of Italian bees.
>
> The hives were all facing the east, in order to catch the first rays of the morning sun. They were all double, and were filled in with chaff, thus making them warm for Winter, and cool for Summer, and doing away with the expensive method of wintering in a bee-house or cellar.
>
> Mr. Young not only markets large quantities of fine honey, but he sells bees all over the West. He sent several colonies to Arizona, sometime ago, which were delivered in good condition, although they had to be hauled a number of miles by wagon.

J. W. Tefft, of Buffalo, N. Y., is again prostrated by *la grippe*. Reports are coming from all quarters, showing that this terrible affliction has come again, and that "right early."

Laying Workers. — Another cure for laying workers, is given by F. H. & E. H. Dewey, in the *American Bee-Keeper*. "Put the infected colony in a ventilated box without combs for 4 or 5 hours, in the shade or in the cellar; then drop in a caged queen, preferably a laying one, and in about two hours more pour the bees before a hive devoid of all brood, releasing the queen to run in with the bees."

The American Metrological Society has prepared a simple and excellent chart of the metric system which, for educational purposes, it will mail to any one asking for it for the cost price, 10 cents in stamps. Address Secretary of American Metrological Society, No. 41 East 49th Street, New York City.

Frank Benton, who has for years been in Europe, and made a trip to Asia and "the Islands of the Seas" to find new races of bees, is now in Washington, D. C. He is engaged by the Government in the Apiarian Section, Division of Entomology, Department of Agriculture. He is well qualified for the position. The Chattanooga (Tenn.) *Times* says:

Dr. C. V. Riley, United States Entomologist, has signified a desire to send Prof. Benton, next year, to India on a mission to investigate *Apis dorsata*, a species of bees of that country. No one else is so well fitted as he for the satisfactory discharge of such a mission.

Last Spring he returned with his family from a residence in the Old World of eleven years, the whole of which time he devoted to the study and exportation of bees. He established apiaries, and lived for one or more years in each of the following places: Island of Cyprus in the Mediterranean Sea; Beyrout, Syria, where his apiary was on Mt. Lebanon; Munich, Germany; Laibach and Krainburg, Province of Carniola, Austria; he also traveled very extensively, establishing an apiary on a French estate in Tunis, North Africa, and even pentrating, in the interest of apiculture, the jungles of India, where he contracted "jungle fever."

In addition to his special work he has been an ardent linguist, and speaks fluently German, French, Italian, modern Greek, and so on. At one time he was studying ten different languages.

Dr. Riley intends to put Prof. Benton in charge of the whole matter of an exhibit in apiculture at the World's Fair. This is a fitting recognition of his ability, and he can be depended on to make the most of the display. He is well-known to some of our citizens, having lived for some time in Knoxville, Tenn., where he was instructor in apiculture in the University of Tennessee.

When Columbus was made a prisoner in San Domingo, the Governor who arrested him feared there might be an attempt at rescue. So he trained a big gun on the entrance of the citadel, or castle, in which Columbus was confined. That cannon has lain in the same place ever since until now, when Mr. Ober, a World's Fair representative, recovered it, and with the permission of the Governor of San Domingo, brought it to the United States. It has been shipped to Chief of Construction Burnham in order that he may use it in some way in ornamenting the Exposition grounds.

Silver Wedding.—The Hon. Eugene Secor and wife, of Forest City, Iowa, having been married 25 years on Sept. 23, 1891, were happily "surprised" by their neighbors. The Forest City *Independent* says:

A grand silver wedding was celebrated in our city on Wednesday evening, Sept. 23, 1891. Mr. and Mrs. Eugene Secor have been married 25 years. A surprise party of about 100 ladies and gentlemen concluded that they would more firmly cement the holy bonds of matrimony of this worthy couple by aiding in tying a silver knot. A magnificent banquet had also been prepared by the invading guests for the occasion. A beautiful silver tea-set, and other valuable things were presented. It was a propitious occasion, and a pleasant evening was enjoyed by all.

Frosts are now to be expected. Prof: Foster's latest forecast is as follows:

Frosts are important weather events, and the first frosts in the Fall, and the last in the Spring, are quite difficult to forecast. No single frost is sufficient to kill all the tender vegetable growths in the same latitude, and where the ground is very dry, frosts are not apt to occur. A frost may kill all vegetation in one spot, and not touch anything a mile away.

I have calculated that the most important frost dates would be about Oct. 10 or 11, 17 or 18, and Nov. 2 or 3, and that the last date would entirely kill the cotton plant.

A warm wave will be due to leave the Pacific coast about the 12th, cross the central valleys about the 14th, and reach the Atlantic about the 16th.

The fourth storm wave of the month will be due to leave the Pacific coast about the 19th, cross the central valleys from the 20th to the 22d, and reach the Atlantic coast about the 23d. A cool wave will cross the Rockies about the 15th, the central valleys about the 17th, and reach the Atlantic coast about the 19th. W. T. Foster.

Bees and Butterflies are thus contrasted by a writer in the *Cornhill Magazine :*

The bee is the *bon bourgeois* of the insect world. It attends strictly to business, loses no time in wild or reckless excursions, and flies by the straightest path from flower to flower of the same species with mathematical precision. Moreover, it is careful, cautious, observant, and steady-going—a model business creature, of sound morals, and sober intelligence. No flitting for it, no coquetting, no fickleness.

Therefore, the flowers that have adapted themselves to its needs, and that depend upon it mainly or solely for fertilization, waste no unnecessary material on those big flaunting colored posters which we human observers know as petals.

They have, for the most part, simple blue or purple flowers, tubular in shape, and, individually, inconspicuous in hue ; and they are oftenest arranged in long spikes of blossom to avoid wasting the time of their winged visitor.

So long as they are just bright enough to catch the bee's eyes a few yards away they are certain to receive a visit in due season from that industrious and persistent commercial traveler.

Having a circle of good customers upon whom they can depend with certainty for fertilization, they have no need to waste any large proportion of their substance upon expensive advertisements or gaudy petals.

It is just the opposite with butterflies. Those gay and irrepressible creatures, the fashionable and frivolous element in the insect world, gad about from flower to flower over great distances at once, and think much more of sunning themselves, and of attracting their fellows, than of attention to business. And the reason is obvious, if one considers for a moment the difference in the political and domestic economy of the two opposed groups.

The honey-bees are neuters, sexless purveyors of the hive, with no interest on earth save the storing of honey for the common benefit of the philanstery to which they belong.

The butterflies are full-fledged males and females on the hunt through the world for suitable partners ; they think far less of feeding than of displaying their charms ; a little honey to support them during their flight is all they need. "For the bee a long round of ceaseless toil ; for me (says the gay butterfly) a short life and a merry one."

The high mountain zone is for them a a true ball-room ; the flowers are light refreshments laid out in the vestibule. Their real business in life is not to gorge and lay by, but to coquette and display themselves and find fitting partners.

So while the bees with their honey-bags, like the financier with his money-bags, are storing up profit for the composite community ; the butterfly lays itself out for an agreeable flutter, and sips nectar where it will over large areas of country. It flies rather high, flaunting its wings in the sun, because it wants to show itself off in its airy beauty ; and when it spies a bed of bright flowers afar off on the sun-smitten slopes, it sails off toward them lazily, like a grand seignior who amuses himself. No regular plodding through a monotonous spike of plain little bells for it ; what it wants is brilliant color, bold advertisement, good honey, and plenty of it. It does not care to search. Who wants its favors must make itself conspicuous.

* * *

Honor again rests on the head of our friend Eugene Secor, of Forest City, Iowa, as will be seen by the following notice from the *Winnebago Summit :*

Eugene Secor has been honored by the election as a lay delegate to the General Conference of the M. E. Church. Ex-Gov. Carpenter and he will represent the laity of the Northwest Iowa Conference, comprising a territory of about 26 counties, and a membership of about 15,000.

The next General Conference meets at Omaha, Nebr., in May, 1892. It will be composed of about 500 ministerial and lay delegates from all parts of the world where Methodism is established. It is the law-making body of the church, and meets quadrennially. It will probably be in session 30 days.

* * *

Queens are introduced in this manner by H. Spuhler, and described in the *Revue Internationale :*

Several hours after the removal of the old queen, put the new one in a little cylinder made of foundation. It is closed at both ends, and furnished with little holes pierced with a needle. After daubing it with honey, put it in the middle of the brood-nest.

The Maiden and the Bee.

A little glade,
A patch of shade,
  A nooklet most delightful;
A pretty maid,
Shy, half-afraid,
A buzzing bee most spiteful.

A dainty flower,
From out the bower
  She plucked for her adorning;
The jealous bee
Came steathily
And claimed it without warning.

—K. Dunlap.

Queries and Replies.

Making Break-Joint Honey-Boards.

Query 788.—Is it advisable to retain the break-joint principle in making the wood-zinc queen-excluding honey-boards?—J. M. B.

Yes.—M. Mahin.

Yes.—R. L. Taylor.

No.—J. M. Hambaugh.

No.—Mrs. L. Harrison.

I do not.—G. M. Doolittle.

I do not use such boards.—J. P. H. Brown.

I think it is, though I have used no others to compare.—A. J. Cook.

I cannot observe that the break-joint makes any difference.—C. C. Miller.

I would not give 2 cents for a patent on the break-joint "principle" (?)—A. B. Mason.

There are arguments *pro* and *con*. The *pros* have the case, in my judgment.—Eugene Secor.

It will be better to prevent brace-combs, but of less advantage for easy ventilation by the bees.—Dadant & Son.

By all means. Just try both ways, if you do not see the point. Use but one row of holes in the zinc strip.—James Heddon.

Not at all. I make them without regard to any break-joint principle, and am not troubled much with burr-combs.—C. H. Dibbern.

I think not, for there are as many burr-combs built in break-joint queen-excluders as in those with continuous passage. We have few or no burr-combs, as we manage with the continuous passage queen-excluders.—G. L. Tinker.

This is a matter that I have never tested. It is a mooted question among our ablest bee-keepers. In theory, it looks plausible, but as tests alone will qualify one to answer, I decline giving an opinion, simply because I have not had experience in the matter.—J. E. Pond.

In my opinion, drawn from practical experience, there was never anything to be gained by the break-joint "principle." It is not in line with modern principles in bee manipulation. No set of *movable* frames can be so evenly spaced as to match a break-joint board. Of course, they can be made to match fixed frames, but fixed frames are but a little advance from the old bee-gum or box-hive. I prefer full sheets of zinc, framed.—G. W. Demaree.

That is a question which allows of a difference of opinion among our best apiarists, but those who have used the break-joint principle the longest are generally very much in favor of its use. That is a good argument for it.—The Editor.

Keeping Bees on Shares.

1. When bees are taken on shares, at what time should the division take place?

2. When the owner of the bees wishes to introduce new queens, who should pay for the queens?

J. A. Wagoner.

Rochester, Minn.

When bees are taken on shares the agreement should be reduced to writing, and all details should be stated. That would save much ill-feeling and many unkind remarks when a division is made. In the absence of such written agreement, the usual and reasonable course would be for the owner to furnish the bees, and the other to do all the necessary work. All expenses for extra queens, hives, sections, etc., to be shared alike. All the swarms and honey should also be shared equally. The honey should be divided at any convenient time, after it is taken from the hives, when it is desired by one or both parties.

Topics of Interest.

Correcting Some Misapprehensions.

E. R. ROOT.

I have read Mr. Draper's article over with considerable interest, and it is easy to see that he has "been there," too. I fail to see, however, wherein we should disagree. We use quite different hives, different frames, and different plans of working. His hive, as nearly as I can estimate, has about double the capacity of the 8-frame dovetailed; and his 23 large Dadant hives, with supers on top, would be but little, if any, lighter than the 57 8-frame hives that we had on the wagon. I agree with my friend, that two men would be required to lift his large hives. If the reader will refer to the quotations he will see that I was not talking about that kind of hives.

I did not say that the hives *averaged* 75 pounds (see quotation); I said from 60 to 75 pounds, and this estimate was made by one of our men, when we arrived at home. I have since found that they would hardly average 60 pounds each.

Again, I did not say that the roads were heavy with mud. They were sandy and gravelly; and although it rained furiously for a time, the water drained away. Instead of there being from 200 to 300 pounds of mud on the wheels, there was practically none.

Now, about the poor team. They are blooded Clydesdales, of the heavy draft type, and our teamster has made his boast that with them he could out-pull four average farm horses. On the trip in question, we drove so slowly (stopping at the top of each hill) that we were two hours in making the distance of seven miles. A ton and a half, or, if you prefer, two tons, is not a heavy load for our Clydesdales, and they pulled the load with ease. The excellent condition of the team attests the fact that we do not overload them. It strikes me as if friend Draper were the one who had been overloading his horses.

I did not say that all the colonies were strong. The apiary was run for increase; and while it produced about 2,000 pounds of honey, it increased from 23 to 85 colonies by dividing; and while the colonies were weak to fair strength (a few strong ones), the hives did not contain "bushels and bushels" of bees.

Another thing: the hives were moved at night, and the air was so chilly that an overcoat felt good, although I was excercising a good deal, at that. If it had been hot, or during the day, we would have used the cover screens which we had with us. Subsequent examination has shown that no bees suffocated.

We move our bees either on a cool day or at night. By taking this precaution it is not always necessary to put on cover screens. J. A. Green did not. The fact is, we must exercise our judgment, both as to the strength of the colony and the day.

And now, my friend does not see how two of us could prepare and load 57 colonies in an hour and a quarter. To save time it is our custom to "look ahead a little" (I do not know whether my friend does that or not), and before starting I had made entrance screens enough for all the hives. Into each end a wire nail was driven nearly through, so that, when we arrived at the yard, all we would have to do would be to place the screen over the entrance, and a couple of blows of the hammer would fasten it. Then we took with us hammer and nails.

An hour and a quarter for two men for 57 hives, means two and a half minutes for each hive for one man. Two nails in the cover and two more in the bottom, and the fastening of the entrance screen, was all the preparation needed, after which the hive was carried to the wagon. Do not forget the fact that the bees were on fixed frames, and, as a consequence, the hives did not have to be handled like eggs. I do not deny that we worked like beavers; but we did just as I said, by the watch, and can do it again. Yes, sir; there were 57 hives on the load. They were counted on the wagon, and after unloading.

Permit me to add, in conclusion, Mr. Editor, that if our friend, Mr. Draper, will make us a call at Medina, we will not only give him a good reception, but prove to him that the statements I have made are literally true.

Without wishing to boast, I would simply say that we are proud of our large team of heavy draft horses; and if he could see them once he would feel satisfied that they are having good treatment, and are not overloaded. Allow me to add, further, that the dovetailed hive is made with special reference to moving, and for use in outapiaries. The difference in hives will largely explain the apparent difference in opinions.

Are We Drifting from Our Moorings?

G. M. DOOLITTLE.

I have read with interest what has been said during the present Summer about hives and their manipulation, as against the manipulation of frames, as has been the custom of the past; and, unless I am greatly mistaken, there is *not* in this idea all the pecuniary benefit to the bee-keeper that a superficial view of the matter would lead to expect. The idea embodies in all of its bearings, unless I am blind in this matter, two things which will be an expensive luxury to the one who adopts this idea of "handling hives instead of frames;" and these two things are, first, a radical change in most of the hives now in use; and, second, the placing of a greater number of colonies in the field, both of which are against us; the latter for all time, and the former for the near future.

This changing of hives and fixtures to the extent to which it has been carried in the past, has been somewhat against us, and the outlook for the future shows no sign of improvement. The changing of hives and fixtures in an apiary that numbers fifty, means quite an expense—an expense that will take many *good* years of production to pay, over and above what might have been secured with the old fixtures, even should the new prove better than the old.

Not long ago a "new" hive come out, the claim for which was that it would cheapen honey production; for surely the producer must produce his crop at a less expense than he was now doing if he was to be enabled to keep his head above water, in these times of low prices. Have we seen these great things accomplished? Let friend Gravenhorst answer: "I found out something by this new method that did not satisfy me in contrast with the old one. In the course of several years I always got more honey and wax in the old-fashioned way." While friend G. was not speaking of this particular hive as "the new method," yet he but voices what many others have found out.

To illustrate more fully just what I mean I will let the reader into a little bit of my past history, together with that of another, whose name I will not mention. When I first began keeping bees it was with the express understanding that, after the first outlay ($35) on them, not another cent should be paid out unless they brought it in, and that I would not pay out for new fixtures a cent of what they brought in, unless I could see that some pecuniary benefit was coming back in the near future to more than balance what I would pay out, and that I would use up, as far as might be, all of the old, without throwing away that which had cost me cash.

This understanding has been carried out all of these years; and to-day, instead of having only $500 as my worldly possessions, as I had in the Spring of 1869, and living in a tenant house, with my small apiary on somebody's possessions besides my own, I have a comfortable home, consisting of 30 acres of land and the necessary buildings; have enough laid aside to carry me and mine through life, unless something extraordinary should happen to us, besides being enabled of later years to do something to advance the Master's interests in the world, and that which tends to uplift humanity; all having come from the bees over and above what I have paid out for them, and I still use the same old Gallup hive with which I started, and see no reason for desiring a change.

In 1869, the "another" before spoken of, counted his wordly possessions far above mine, produced much more honey each year than I did, as a rule obtained better prices, but laid out each year all or more than what the bees produced in "something new," throwing away that of the past which did not suit, and purchasing new again; till a short time ago found him borrowing money that he might still purchase something new in the "bee line," while there were wagon loads of stuff, representing thousands of dollars, to be found strewn about the premises, that had accumulated by this great desire to keep "abreast of the times," and "secure the greatest amount of income with the least capital and labor."

Now, do not understand me as "butting" against improvements, for no one rejoices more over real improvements than I do; but if I am to rejoice, the thing offered must be an improvement when viewed from all of its many sides. Talk about handling hives instead of frames! The old hive, as given us by Father Langstroth, with a movable bottom-board and no portico, can be handled just as you please after the bees have been in it (on this plan) one year; and yet how many of the bee-periodicals of to-day are recommending it as *the hive?*

To be of real value, unless a radical change is necessary, it is better to tell us how to secure the same results with what we now have, rather than advise something new to secure these same results. The "stone that keeps rolling gathers no moss."—*Gleanings.*

Experience of a Beginner.

B. H. NEWLAND.

I wish to relate my little experience in the bee-business, and if it does not teach anything positively, it may negatively.

Last Winter I boarded with a subscriber to the BEE JOURNAL, and became really interested in the business—so much so that I bought a Revised Langstroth and AMERICAN BEE JOURNAL, and studied them very thoroughly all the Spring and early Summer. But I could forget details faster than I could learn them by reading, so in the middle of August I bought 2 colonies of hybrids, in simplicity hives, after buying five improved Langstroth simplicity hives in the flat, a smoker, and 5 pounds of foundation.

The first bad mistake I made was in locating my new industry, which is near the house, on the west side, and well shaded by three oak trees; result: my bees are late getting to work, for they cannot get the sun at all until 11 o'clock, and not much after that.

I moved my bees home, about three miles, let them rest a day, and read a chapter in Langstroth; then I divided the 2 colonies, into 4, dividing brood and honey to make them as nearly equal as I could, filling up and replacing with frames of foundation in full sheets. When doing this I looked for queens, but I could not find them. I found later that one queen was put into one of the new hives, and the other was not.

I then thought I could watch how they worked outside, and judge from their actions where the queens were; O, I had read the theory so much that I knew all about bees—could tell with my eyes shut and one hand tied behind me—could tell by the songs they sang.

Next I sent to A. I. Root for 2 untested queens, which came promptly. Now, I supposed (another mistake) that the old colonies were queenless, so I looked the frames over, and in the first one found 3 royal cells, one of them sealed. I removed these, and the next day introduced one of the Italian queens; in 2 days the bees had worked her out of the cage, and she had gone to keeping house.

The other old colony I examined on the same day that I did the first one, and found no queen nor queen-cells, but *thought* she surely had been transferred to the new hive; so I introduced my other Italian queen at once; looked in the next day and found the bees working at the candy in the cage, and quite a cluster around the cage, so I *thought*, she is all right. The next day I looked in again, and found the cage empty, and *thought* she is O. K.

I sent to Mr. Root for 2 more queens, which came in five days, when I got a man to help me who had studied bees as well as books. You see, I had never seen a queen-bee until I bought them of Mr. Root, and I wanted him to show me the queens in those new hives. The first one we looked at had royal cells, and one nearly ripe; then my bee-man wanted to know which of the old hives I took this new one from. I showed him, and he said, "Let us look through it." We did so, and found the queen, but she was not one of those which I had introduced a few days before. I think Mr. Root's queen is out in the grass in front of the hive. I caged this queen, however, with a few workers, and we looked through the other new hive, and soon found the queen and destroyed her.

I then returned the queen, which was not Root's, to her hive, and she has been there ever since, until to-day I caged her again, and to-morrow shall introduce another of Root's queens, which I have just received.

The next day after my bee-man was here I introduced the two Italians, and the second day after I found the queen in the first new hive all right on the combs, and the queen in the last hive was balled on the bottom-board, so I ran into the house for a cage, when I had one right under my nose; then I ran into the house again for a basin of water. When I picked up the ball the bees scattered, and the queen flew, I did not know where, and I spilled the water.

But I kept looking for the queen, for I did not know surely that she had flown, and after a few minutes I began to look around the other hives, and found her balled again, at the entrance of another hive, ten feet away. Then I got another basin of water, threw the ball in it, and soon had the queen caged. On looking this hive over again, I found a queen-cell which had been overlooked when I introduced the queen. I destroyed the cell, and the next day introduced the queen again, and she was accepted.

So I have had to buy five queens to Italianize four colonies, and I believe it is worth the time, trouble and money they cost to have Italian queens, because they are so easy to find on the combs.

Some may think, on reading this, that I disparage bee-books and bee-periodicals, but I do not feel that way, for I shall get more bee-books and bee-periodicals as fast as I can afford to. I would like dozens of them.

I am feeding sugar syrup now, and intend to give 15 pounds to each colony.

Melrose, Wis., Sept. 14, 1891.

Location and Care of Out-Apiaries.

W. Z. HUTCHINSON.

When a man starts an out-apiary, it is because he thinks his home-yard overstocked, and that he will get enough more honey by the division to pay for the extra labor incurred. Overstocking is one of the most puzzling questions connected with bee-culture. We all know that a locality *can* be overstocked, but localities, seasons, and bee-pasturage are so variable that it is impossible to lay down any set rules in regard to the number of colonies needed to overstock a locality. It must not be forgotten that the yield per colony—yes, and in the aggregate—may be diminished to a considerable extent by overstocking ere the establishment of an out-apiary would be a profitable move.

I have had no experience with out-apiaries, but I believe that the majority of inexperienced bee-keepers have erroneous ideas in regard to the difficulties and expense attending the establishment and management of an out-apiary. Land must be bought or hired, some sort of a building or shelter secured, and a conveyance of some kind will be needed for carrying bees, tools, supplies, etc. Then there is the preparation of a cellar for wintering the bees, or else they must be carted home in the Fall and back in the Spring, or else protected upon the summer stands.

But when a man begins to number his colonies by the hundreds, he knows that *something* must be done. Even if out-apiaries are not so profitable as home apiaries, they are not usually run at a loss, while the removal of the surplus bees at the home yard, allows them to make better returns.

When keeping bees upon the out-apiary plan, there must of necessity be much moving about of hives from one apiary to another. An out-apiary is seldom supposed to be permanently located. If some locality furnishes but little honey, it is wise to abandon it and put the bees in some better locality. It certainly would be wise to take considerable pains to ascertain the character of a locality before going to much expense in fitting up in Spring time. As J. A. Green said, in the October *Review*, for 1890:

"To make money with out-apiaries, it is not enough to measure off the proper distance from the home apiary, in any direction, and plant an apiary there, thinking the bees will do just as well as anywhere else. Modern apiculture must do more than that. I cannot escape from the conviction that to make the most of an apiary, it must be capable of being easily and quickly moved at any time during the working season."

When it is finally decided to start an out-apiary, how far away should it be located? We have been repeatedly told that, ordinarily, three miles mark the limit of a bee's foraging grounds; hence, if apiaries were placed six miles apart, there would be no encroachment. But it must be remembered that the pasture ground of each apiary is somewhat circular in form, and that they might be moved towards each other to a considerable extent without one encroaching upon the other very much.

Dr. Miller has given a very happy illustration. Lay two silver dollars side by side; lift the edge of one and slide it over the other. Notice how far it may be pushed over without covering a very large portion of the under dollar. Notwithstanding all this, those who have had experience in the matter are not inclined to put out-apiaries nearer together than four miles, and prefer to have them five, or even six miles apart. When the team is "hitched up," and on the road, a mile or two more travel does not take so *very* much time, and the increased yield may more than make it up. We cannot always secure the exact spot desired for the establishment of an out-apiary, and it would probably be well to go a little farther than is really necessary than to crowd some other apiary.

Having decided upon a site for an out-apiary, the next consideration is its management. Shall comb-honey be produced, or shall the honey be taken in the extracted form? Shall the apiary be managed upon the visiting plan, or shall a man be kept there all the time during the swarming season? I believe that, in the majority of cases, extracted-honey is produced in out-apiaries, as by this plan swarming can be so nearly controlled, and the apiary visited only at intervals.

In producing comb-honey, the difficulty is that most of the colonies will swarm, unless the queens are removed. Mr. Manum, Mr. Elwood, Mr. France, and a few others practice removing the queens just at the beginning of the swarming season, and pronounce it a success.

I have, as yet, said nothing about the number of colonies to put in an out-apiary. It ought to have as many as the location will bear; certainly enough to make a day's work at each visit during the busy season. It would be unprofitable to drive off five or six miles to do only a part of a day's work. Where all necessary tools, etc., are kept at the out-apiary, and all the bee-keeper has to carry is himself, a bicycle is a very excellent kind of conveyance. It is fast, always ready, requires little care, and stings do not make it run away. If the apiaries are in or near towns connected by railroad, it is a great convenience.

Instead of having any buildings at the out-apiaries, some bee-keepers use a small tent that is easily "struck," and carried from one apiary to another.—*Country Gentleman.*

Predicting the Honey-Flow.

SAMUEL WILSON.

I have ascertained that Fall flowers fail to secrete nectar from the same cause that results in failure with the linden and white clover, and if bee-men knew the true cause of the failure of the honey crop, as I do, each one would know of the impending failure 5 or 6 months in advance.

I have discovered that the conditions that cause linden and white clover to fail to secrete nectar, produces a honey-flow from ivy. What we call ivy here is what produces poisonous honey. There is plenty of laurel, ivy and hemlock, which are nearly alike, but it is the ivy that produces the poisonous honey, and not the laurel, as I have seen stated.

At present, I am not ready to make known my secret, preferring to prove to the bee-keepers, first, what I can do. I know, beyond a doubt, the true cause of the failure of flowers to secrete nectar, and I will prove it to bee-keepers by telling them, long in advance, of any good honey-flow, or of any general failure, and I wish to ask space in the AMERICAN BEE JOURNAL for the publication of my predictions, which I expect to have prepared by February, 1892, and in which I wish to include California.

My aim is to convince bee-keepers that I am not a humbug, even if it takes 10 years, or longer, to do so. I would like the bee-keepers of North Central Iowa and Southern Illinois to send in their reports for this season, and see if they do not verify my predictions.

When I say that I can foretell a failure of the honey crop, or a good crop, I mean that I can tell the amount of nectar that the flowers will contain, if there are any flowers. There might be plenty of nectar in the flowers, and the weather be such that the bees could not work; or hot, dry weather might dry up the bloom, nectar and all.

Bees have had a long rest in this part of Tennessee, but they never gather any honey from July 15 or 20 until about Sept. 15 to 25, in this section. They are doing well now, and the weather is fine, but very hot and dry for this season, and will soon dry up the white bloom, if it continues.

Cosby, Tenn., Oct. 3, 1891.

Bee-Keeping in Wisconsin.

JOSHUA BULL.

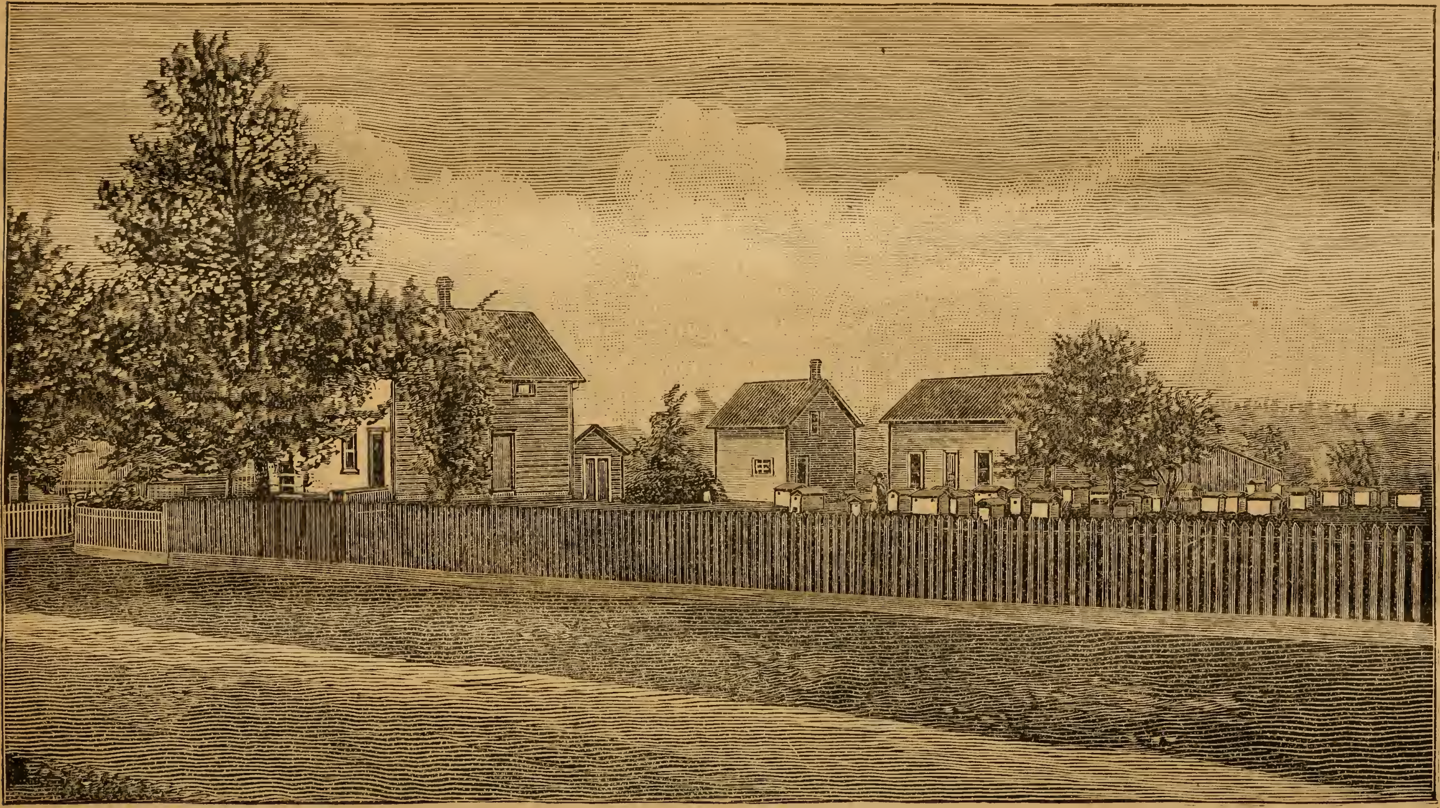
The past season has been a very poor one for bee-keepers in this locality. My bees stored, on an average, about 35 pounds per colony, mostly comb-honey from white clover.

We got no basswood honey this year, the late frosts last Spring having destroyed the buds. The yield from Autumn flowers is very light, owing to the extreme drouth, which has not been so severe since 1871.

Forest fires are becoming very numerous and troublesome. The weather has been unusually warm for this season of the year, and during the past ten days the mercury has risen to 90° and upwards nearly every day; yesterday it stood at 94° in the shade. It is a little cooler to-day.

Having recently sold my farm I have had a photograph taken of my apiary before leaving it, and following the example of some others, I send a copy of the picture to the highly esteemed AMERICAN BEE JOURNAL.

The first building seen back of the dwelling house, is a poultry house, the second is a work-shop, where I made my hives and other fixtures, the third is a house, 20x25 feet. The lower story is



MR. JOSHUA BULL'S APIARY, SEYMOUR, WIS.

divided into two rooms, one of which is used for the general work of the apiary, such as handling sections and supers, extracting honey, etc., etc. The other room is for storage of honey after it is ready for market until sold. The fourth building, which is much obscured by the apple trees, is a house apiary, with the workings of which I am well pleased, and believe that it is a success.

Seymour, Wis., Sept. 25, 1891.

New Bee-Disease in Texas.

L. B. SMITH.

About a week ago as I was walking through my little apiary, I happened to notice an unusual amount of bees, dead and dying, lying in front of a hive that contained a strong colony. Thinking at first they were the old worn out bees, I went on and thought no more about it.

The next day I was looking at them again, and there was a pint or more dead in front of the entrance. I knew that something was the matter. I examined them, taking out all the frames, and found they had plenty of nice sealed honey, and plenty of sealed brood, but no eggs nor larvæ. The queen had stopped laying. Not knowing what to do for them, I let them alone, and in a few days they quit dying.

Then another colony took it, and every one died, queen and all. They still keep dying. I have lost two of my strongest colonies and about half of another. One of them contained my finest breeding queen, and I hated to part with her.

I find from investigating that several of my box-hive neighbors are losing bees in the same way. Some of them say the moth-worm is killing them, others say ants, while some of them say the king is dead, and they are fighting among themselves, trying to make each other work; but of course, all practical bee-men know different to that. They act more as if they were poisoned; but it cannot be that, for there is no poisoning going on in the country, and I know they are not poisoned. Now, if it is not the so-called nameless bee-disease, I have no idea what it is.

Symptoms of disease are, that it seems as if the old bees were effected. They will come rushing out somewhat excited, and will drop on the ground, after rolling over several times they die, while others will crawl several rods from the hive. They can be seen at all hours of the day and night, crawling all over the place.

I can take a frame from the hive and shake it a little, and nearly half the bees will fall to the ground and never make an attempt to rise, nor get back to the hive, but will crawl off and die.

Their appearance and size is natural, so far as I can see, with the exception of a few that look somewhat swelled. I can take one and tear it open, and they seem to have an unusual amount of pollen in them, and smell very offensive. I have most of the standard works on bees, but have failed to find anything suited to this case.

Lometa, Texas.

The above is copied from the *Canadian Bee Journal*, and the editor makes the following comments on the matter:

Thank you very much, friend Smith, for giving us the particulars of your bee trouble. We have never had the like here, and never known a similar case to yours, therefore, we are at sea in the matter. In our experience we have endeavored to see what bees would do when poisoned, and they acted very much like you say yours act. We think there must be some poisonous plants in the locality, where they get more or less honey, or it may be from honey-dew; possibly it may be some strange disease.

We frequently find contagious diseases cropping up among the human race, and why may not similar diseases occur among bees? We think it would be worth your while to send samples of these dead and sick bees to Prof. Cook, Agricultural College, Mich., that he may examine them.

Wholesale Slaughter of Bees.

DR. C. C. MILLER.

FRIEND NEWMAN:—I am in receipt of the following letter:

"DEAR SIR:—I wish you would give me some advice, what to do and how to get about it. Two men, or a company of men, came to our town (Coulterville) and started an evaporator, and left their house doors and windows all open, and had four flues for drying their apples. Well, I keep bees. I have 128 colonies within 300 yards of the evaporator. So you see there was a perfect swarm on the road every day for 4 or 5 weeks, and they killed them by the million in their furnaces, and in a great many other ways. I am a member of the National Bee-Keepers' Union, and can furnish plenty of evidence. I consider they killed more than one-third of my bees. I would have had over 2,000 pounds of honey this Fall, and now I will not have over 200 pounds, and I am afraid there will not be bees enough in the hives to keep them from freezing this Winter; and if that is the case, I will not get much honey next year. So you see the condition I am in. I wish you would see what can be done in my behalf.—R. H. WOODSIDE."

The above letter makes a powerful appeal to my sympathy, as I suppose it will to all bee-keepers, and yet I am afraid there is no redress. The evaporator company are in the pursuit of their legitimate business, and quite possibly are under the impression that they are the aggrieved parties, in suffering the annoyance of the bees. Is there any possibility of the bee-keeper securing anything for damages? If not, I suppose it is because there is no law touching the case, and the question arises whether there would not be justice in having such a law enacted.

Many dollars' worth of bees are killed every year by cider mills, sorghum mills, and other things of that kind. If the value of the bees thus killed is greater than the expense of enclosing such places against the bees, then it would be economy for the commonwealth to enact a law compelling the enclosure of all such places. Whether the expense of such enclosure should be borne entirely by the owners of such establishments, I am not prepared to say. Without any restriction, I can easily see how those persons who are active in driving out bee-keepers might have a ready means of destroying a whole apiary without the least fear of punishment. Is there any redress for our friend? If not, is it not desirable to secure a law that would make redress possible in such cases, arising in future?

Marengo, Ills.

[The evaporator people are no doubt the aggressors—they came in the neighborhood last, when the apiary was already established, and in running order—they began a legitimate business, but conducted it in a careless way, leaving attractions for the bees, alluring them to death. They have no cause for thinking themselves the aggrieved parties—*they cannot complain!* They ought, in justice and equity, to screen out the bees.

The apiarist has good cause for complaint. His bees are enticed to their death! His rights to pursue a legitimate business are invaded! His property is destroyed, and his business is ruined!

But what is the remedy? In Mansfield's Digest, Sec. 751, we find full details of the power to abate a public nuisance; but this evaporator, probably, is not a public nuisance, only an interference with the business of a private individual, and as such would be a more difficult matter to prosecute than if it was detrimental to the public at large.

Our advice would be to arrange a conference between the apiarist and the managers of the evaporator, and then settle matters amicably, if possible. Let the doors and windows of the establishment by protected by screens or mosquito-bar (it costs but a trifle), and thus prevent the wholesale destruction of the bees.

If the company object to the expense, it would be advisable for the apiarist to contribute toward that purpose, even if it became necessary for him to pay 99 per cent. of the cost, to accomplish the screening.

If negotiations all fail, then some other way may present itself for the solution of the difficulty.—ED.]

Crowding the Brood-Nest.

C. W. DAYTON.

For several years past we have had very cold Springs, and it has been my custom to contract the brood-chambers down to five or six combs, with division-boards, and remove the extra combs to the honey-house. Then when the season advanced—grew warmer—and the colonies became strong enough to cover and rear brood in more than the five or six combs, the combs which had been removed were brought out, and, one or two at a time, inserted in the hives again.

In giving a colony another comb at this season, I put it at the side of the brood, not in the center. If it is put in the center, it does not hasten brood-rearing very much, if any, but tends to scatter the brood, and if it turns cold, some of the outside brood may chill.

During the last eight or ten years there have been four or five times when the combs were not returned to the hives fast enough; generally by neglect. What was the consequence? Well, it was this: The five or six combs were found thoroughly crowded with brood and bees, little ridges of new comb started here and there, and in a large number of hives queen-cells were under way.

It is seldom that I desire any swarm at all. I prefer to run the colonies straight through the season, in full force. Now, when these colonies were found with queen-cells started for swarming, the division-boards were moved further away, and four or five more combs put in at once.

Did they preserve the cells and cast a swarm, after the addition of combs and the enlargement of the brood-chamber? They did not, Not one colony in 75 swarmed. In less than three days all these queen-cells were emptied of their contents.

What became of the eggs and larvæ that the queen-cells contained? I believe the bees removed them. I never believed that these colonies had the "swarming fever." Still, in all probability they would have swarmed if allowed to remain in their contracted condition.

At other times cells were far enough along to be capped when the original brood-combs were distributed amongst three times their number of empty combs and foundation, and they swarmed just the same. Even if the cells were cut out, they started more and swarmed.

"A stitch in time saves nine," runs the old adage, and it is no more applicable anywhere than in the prevention of swarming. The way to apply it is to destroy the cells as soon as started, instead of destroying them after they are finished. It would be still more advantageous to prevent eggs ever being placed in the cups.

If there is empty comb, either for the storage of honey or the rearing of brood, close to the brood-nest all the time, not one colony in fifty swarms.

In most systems of management the brood-chamber remains undisturbed from the Spring until the honey harvest, containing from 8 to 10 combs, and in this space the honey and brood must crowd each other. If sections are put on, they are an empty, unenticing apartment, that bees have no use for, just before the harvest, and it is so difficult to crowd bees into them through the bee-spaces and honey-boards that they choose to hang out at the entrance instead. This is when the "swarming fever" rises.

The best way is to use a hive of the capacity of 12 to 14 combs, and keep spreading the colony by inserting empty combs, or wide frames of sections, between the brood-combs until, when the honey harvest begins one is not required to put on the surplus receptacles all at once, in one or two days, but work them into the hives gradually, and when the harvest arrives in earnest the strongest colonies will already be in the surplus receptacles—will have gotten acquainted with them, and be ready to bring in the honey.

It may be truthfully said that bees do not swarm until they get their hives crowded with brood, bees and honey; and few hives in use are large enough to prevent this. But why are hives too small? The hives are calculated to be of such size that they may become so full of brood that nearly all the honey gathered must be stored outside the brood-chamber—that is, it would be forced outside the brood-chamber into marketable combs.

The bees do not pass from the brood-chamber into a super near so readily as from one comb to another in the lower hive. In 1882 I had so much difficulty in getting the bees into the sections that I filled two hives half full of division-boards and half full of brood-combs, and then filled a section rack half full of sections, and placed the sections between the two hives. After that I divided my hives horizontally 5 inches in depth, like Mr. Heddon's new hive. All this was to get the empty sections located between the brood-combs.

After traversing in the upward direction for awhile, I concluded there were entirely too many sections in a super to alternate with the brood in any manner. The intention was to make the bees work in the sections drawing out the foundation when there was not very much honey coming in, or if they were going to hang outside the brood-nest to hang in the sections. In some instances, in the case of the divided brood-chambers, sections had the foundation built out only at the top and bottom where they came near the upper and lower brood apartments, and sometimes 2 or 3 sections were worked out as a road or "run way" between the brood apartments.

From this it was concluded to put the sections in wide frames in the lower hive, and alternate with the brood-combs, as they would then work upon the whole face of the sections, and on both sides.

The trouble here was that the queen filled the sections (as soon as filled with comb) with eggs, which necessitated taking them out, and keeping them out long enough to chill the eggs and then put them into supers.

This was entirely too slow work, so it was decided to confine the queen in an apartment 8 or 10 days before the harvest, and run the sections right through the harvest in wide frames in the lower story. In fact, the brood and queen are surrounded by sections on two sides beside the top of the hive.

I confine the queen in the apartment by the use of two peculiarly constructed division boards, and three or four strips of zinc to fit into the spaces between the frames, and which may be instantly adjusted or removed from any kind of frames in use. The division-board is applied to the frames—not to the hives, as would generally be supposed.

At first, five or six brood-frames were allowed to remain in the queen's apartment, but have now reduced the number to four, and may eventually reduce the number to three, as the space of time necessary for the queen to be restrained is much less than was at first supposed.

By this method I manage to contract the queen's *laying space* while the bees are allowed all the space for the storage of honey that the capacity of the hive will afford.

Clinton, Wis.

Carniolan Bees—Honey Crop.

D. C. M'LEOD.

I have had some experience with the Carniolan bees, having received queens from four queen breeders—two from Mr. Pratt, and one from each of the others—all claiming that their stock was pure, but I had better looking Carniolans in my apiary, which were a cross from a queen that I bought several years ago, when A. I. Root published so much about them in *Gleanings*, but the queen was not pure.

Last year I sent to a queen breeder for a queen. My order was one of the first of the season, but was overlooked, and I waited until Fall, and then wrote to him, asking if he intended to send the queen. I received an immediate answer, stating that my order had been overlooked, but that he would send two queens the next week—one to fill the order, and the other for the annoyance I had been subjected to—and the week following that he would send a third one, to show his good will.

The queens all came safely, and were successfully introduced, but so late that no brood was reared last year, and I could not tell anything about them until Spring. However, they all proved to be purely bred, beautiful silver and gray Carniolans; not a mixed bee in either of the three colonies. They are beauties.

The honey crop was a failure last year, and this year it is worse than last, there being no honey, except from fruit bloom. White clover gave us no honey, and Fall flowers are yielding no nectar. Bees in this locality will have to be fed.

Pana, Ills., Oct. 2, 1891.

Defending the Black Bees.

JOHN HANDEL.

I am pleased to notice that Mr. Ellingwood has put in a plea of defense for our native or black bee.

I looked over the advertising columns expecting to find improved native queens for sale, but found none.

Mr. Ellingwood is like hundreds of others, honey-producers, of course, and readers of the BEE JOURNAL, who are really sick and disgusted with the many slanders flung at their brown pets.

I do not object to queen-breeders booming the strain of bees they have to sell, but the testimony, and consequently the slurs of those who, having a colony of Italians in a new frame hive, protecting them and supplying them with all necessaries, and at the end of the season comparing them with their blacks in their neglected box-hive, is found in print quite too often.

The keepers of black bees, like the bees they keep, are not much inclined to defend themselves, and while some of the keepers of Italians are robbing the blacks of their good name, the Italians are robbing them of their stores.

The fact that the blacks do not defend their homes sufficiently, is only true when that inquisitive Italian is around prying into every crack, and taking them by surprise (I mean their honey), before sunrise, for if those who boom the Italians' early rising qualities will rise early themselves, and rub the dust out of their eyes, so they can see where their yellow pets go for breakfast, they will find good reasons why their Italians build up faster in the Spring than their blacks.

Savana, Ills.

Sugar Syrup in the Sections.

ALLEN LATHAM.

While on the street here yesterday, I saw in a store what appeared to be some excellent comb-honey. It was offered at the low price of 18 cents, retail. I said to myself, "How's this? I must try a box."

I took the box to my room and examined it. It was beautiful, and I thought at first that I was deceived in questioning its purity. I cut the comb. The honey was colorless and glassy in appearance. I tasted it, and the flavor was extremly mild. There was a bee-taste, but the flavor resembled no honey known to me, and I know nearly all the kinds in this section of the country. The taste left in the mouth was just that which is left after eating granulated sugar syrup.

The carton in which the honey came is labeled: "Choice Comb-Honey, from the Green Mountain Apiary of O. J. Lowrey, Jericho, Vermont."

I am not the one to be sticking my nose into business which does not concern me, but I think that this is not honey, and will bear investigation.

I may be mistaken, yet I detected a similar fraud practiced by Dr. Searles, of Worcester, Mass. Last year he took all the premiums in the New England Fair upon honey, and all the honey that he exhibited was sugar syrup stored in combs. The box which I bought yesterday was exactly like some which I got from Dr. Searles.

The merchant here says that he bought all that Mr. Lowrey had at a bargain. He calls it the best honey he ever had in his store.

Cambridge, Mass., Sept. 30, 1891.

[Sugar syrup should never be fed to the bees except to keep them from starving, to stimulate breeding, or for Winter stores. To let them store it in sections for sale is a fraud. No honest person would allow it to be done. If Mr. Lowrey has inadvertently permitted this, he should at once recall all that unsold, and thus remedy, as far as possible, the evil effect of such a transaction. If he has not done it intentionally, the readers of the BEE JOURNAL would be glad to hear from him.—ED.]

Honey-Dew Not Marketable.

In some places large quantities of honey-dew have been stored the past season. It is possible that some of this may be harmless, but that gathered from some trees and plants will undoubtedly be injurious to Winter stores. I should be afraid to risk it, especially if wintered in a cellar or other bee repository.

It may do very well for feeding in the Spring; but on no account should it be put on the market, either as extracted or comb-honey. It will surely ruin your market if you do.

It is safe to offer for sale no honey that you would not put on the table when you have company. A bee-keeper ought to be a good judge of the quality of honey, and he ought never to sell any that he knows is not first-class, because honey is bought as a luxury, not as a staple article of food. People who buy a thing as a luxury are willing to pay a good price for it if it suits their taste, but, with good sugar at 5 cents per pound, you must not expect they will call a second time for a low quality of honey.—*Farmer and Breeder.*

Convention Notices.

☞The Michigan State Bee-Keepers' Association will meet in Grand Rapids, Mich., on Thursday, Dec. 31, 1891, and Friday, Jan. 1, 1892, GEO. E. HILTON, Sec., Fremont, Mich.

☞ The Northwestern Bee-Keepers' Society will hold its annual convention at the Commercial Hotel, corner of Lake and Dearborn Streets, in Chicago, Ills., on Thursday and Friday, Nov. 19 and 20, at 9 a.m. Arrangements have been made with the Hotel for back room, one bed, two persons, $1.75 per day, each; front room, $2.00 per day for each person. This date occurs during the Exposition, when excursion rates on the railroads will be one fare for the round-trip.

W. Z. HUTCHINSON, Sec., Flint, Mich.

The Executive Committee have fixed the date of the next session of the North American Bee-Keepers' Association, Dec. 8 to 11, at Albany. There will be an informal meeting on the evening of Tuesday, Dec. 8, for getting acquainted, etc. The real work of the convention will commence Wednesday morning, and extend through two full days, ending Friday morning, giving distant delegates time to get home before Sunday. We want all to get there if possible on Tuesday. If they have a few hours of daylight it will give an opportunity to look around the city, view the capitol building, etc. Reduced rates have already been secured in all trunk-line territory, and the same is expected over other railroads. The programme is now under way, and other arrangements are nearly completed. If you have decided to take a vacation that will, we trust, be profitable, don't fail to attend this convention.

P. H. ELWOOD, Pres., Starkville, N. Y.
C. P. DADANT, Sec., Hamilton, Ills.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Nov. 19, 20.—Northwestern, at Chicago, Ills.
W. Z. Hutchinson, Sec., Flint, Mich.

Dec. 31.—Michigan State, at Grand Rapids.
Geo. E. Hilton, Sec., Fremont, Mich.

Dec. 8, 11.—North American, at Albany, N. Y.
C. P. Dadant, Sec., Hamilton, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—P. H. Elwood....Starkville, N. Y
SECRETARY—C. P. Dadant......Hamilton, Ills.

### National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

Bee and Honey Gossip.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Excellent Fall Crop.

Bees in this vicinity have done excellently this season. Especially is this true as regards the honey crop from Fall flowers. W. H. HEPLER.

Manhattan, Kans.

Owing to the Drouth.

Bees are not getting any honey now, on account of the drouth. Old colonies will have enough stores for Winter, but young ones will have to be fed. I have used several smokers, but like the Bingham best of all—especially the "Doctor." I can smoke bees to death with it. The dovetailed hive, with Hoffman frames, ⅞ inch top-bar, is my favorite—no more burr-combs now. EDW. SMITH.

Carpenter, Ills., Oct. 5, 1891.

Bees Short of Stores.

This has been a poor season for the apiarist in this portion of the country. The best of them are just about making expenses. Colonies are light in stores; averaging about one-half enough for safe wintering. I commenced in the Spring with 112 colonies, increased to 155; and took 2,000 pounds of comb-honey in 1-pound sections, and 500 pounds of extracted. We are hoping for and expecting a better season next year. A. A. BALDWIN.

Independence, Mo.

Best Bees for the Locality.

I am familiar with but two races of bees, and their crosses, viz.: the German, or black bee, and the Italian. A prominent apiarist has said that the "relative merits of the two races have been discussed and settled 20 years ago, yet occasionally partisans revise and often reverse the judgment then arrived at. Unfortunately for the cause of truth, these discussions are not always for the sake of truth. Partiality, or what is worse, selfishness, will obscure a fact, and the diseased moral condition which hides a fact will substitute a falsehood." There is another class, who, although less reprehensible, are yet unworthy of credence. With them, a single swallow makes the Summer, and this is about all the fault I can find with these men. Conditions alter cases, and it is possible that what is best for me might not be best for some one else. One man may live where honey comes like Summer rain, and in such a locality, who can doubt but that the German bee will get her share of it; but with me it is sip, drip; sip drip; and the nnbounded energy of the Italians is needed to gather it. JAMES HAMILTON.

Beason, Ills.

Peculiarities of an Old Queen.

A number of years ago I procured an Italian queen, and her bees were all right—all had three yellow bands—but after she had been in the hive about 4 years, the bees began to be dark, and unevenly marked, and some were nearly black. I thought, of course, that the old queen had been superseded, but on examination I found that same old clipped queen in the hive, and still laying, but seeming to be much smaller and weaker than formerly. In the Fall, I discovered a single queen-cell in the hive. I removed this, and was surprised, a few days later, to find another cell started. This one was not distured, and in due time a queen came out, and I saw her depositing eggs on one side of a comb, and the old queen on the other side. After destroying the old queen, the bees again became all alike—that is, the diversity of color disappeared with the removal of the old queen. I wish to know what caused this queen to lay eggs at first which produced three-banded bees, and later in life the same queen produced one and two-banded bees? O. P. MILLER.

Glendon, Iowa.

[As the queen was old, having been in the hive 4 years, it was evident that she was exhausted; and some imperfection in her ancestry, perhaps, cropped out, showing that although she was so nearly pure as not to show any variation in the markings of her progeny when she was young, in old age, when the contents of her spermatheca became exhausted, she might lay eggs which produced bees unevenly marked, or some very dark ones.—ED.]

◆

No Fall Honey Crop.

The honey season, just closed, was not very good. From over 90 colonies in the Spring, I have sold a little over 1,000 pounds of white comb-honey; there is quite an amount of honey-dew and mixed, which is not fit for market. We have had only one light shower of rain in over five weeks. There has been no honey gathered from buckwheat or Fall blossoms, and the pastures are dried up.

It did me good to read your article, on page 421, on Foreign Mails. I send the following item from the Liverpool *Courier*, showing the injustice of the whole system:

"A Bostonian landed in Liverpool a few weeks ago, and purchased, among other things, two small brooches as birthday presents for American children. The two cost 16s. As jewelry is not permitted to enter the States by post, a little box was sent by the Parcel Express, costing 2s. The official charges have just come to hand on the printed sheet of a leading express company, and I transcribe them: Duties, $1.00; cartage, shipping and delivery, 35 cents; postage, etc., 10 cents; entries, custom-house fees, etc., $1.20; total, $2.65. Call this in English money 10s. 7d., which, with the cost of carriage to New York, 2s., gives us 12s. 7d. for two little trinkets costing 16s. A fact of this kind is worth many arguments, and does much to open the eyes of traveling Americans." W. ADDENBROOKE.

North Prairie, Wis.

Gathering Honey Freely.

Poplar, linden and sourwood are our best honey producers here. We had a good flow of honey through a portion of April; also through May and June the flow was excellent. Linden and sourwood failed, and there was no honey gathered from June until about the last of August. Bees are doing well here now, working on Spanish-needle (smartweed, as some call it), but mostly on the asters, or what we call white-top weeds, gathering honey freely. Bee-keepers here who do not know their business, very nearly starved out their bees in the months when no honey was gathered. I have heard of some starving to death, but if the honey flows in for a few days longer, they will all be in good condition for Winter, as the asters, golden-rod and some other varieties of flowers grow in abundance here. We have plenty of white clover, but it hardly ever yields any honey, I think. There is a kind of vine here that generally yields some honey in August. Some people call it wild hop vine. How do laying workers originate? Will they be found in a hive deprived of a queen in the absence of larvæ? Will mature workers turn to laying? I have had a good deal of experience with queenless colonies, which is my reason for asking these questions. R. A. SHULTZ.

Cosby, Tenn., Sept. 27, 1891.

[Many mature worker-bees are capable of laying eggs, and in a queenless colony often use that power in the futile effort to save the colony from extinction—but their eggs only produce drones. Every worker-bee, being a female, could have become a mother or "queen" had it received the necessary food and attention in the larval state. But with undeveloped sexual conditions, and being infertile, their eggs only produce drones. As these "laying workers" are matured, their presence is in no way dependent upon the presence of larvæ.—ED.]

◆

Another Failure.

The honey crop in this section has proved a failure again this season, or nearly so. Bees have sufficient stores for Winter, if the strong colonies are made to help the weak ones. A. J. HATFIELD.

South Bend, Ind.

Wavelets of News.

Fairs and Bee-Lore.

I am pleased to see that these grand reunions of our people are generally so well attended throughout the country this season, and that they have so many interesting features, as, for instance, old settlers' and children's day. Here we meet old friends and schoolmates of our early days, and are reminded of the past intervening years.

At one of these fairs I met an old schoolmate whom I had not seen for 40 years, and I said, "Sarah, what have you been doing all these years?" She answered sadly, "O, cooking and washing." It is important that cooking should be done as long as people must eat, but the sadness of this woman's voice caused me to think that her soul was hungry, and had not been properly fed along with her body, as is the case with many.

When bee-keepers meet at the general round-up, we always ask, "What papers do you take?" One who is fully up to the times, has learned by reading the opinions and practices of all the prominent bee-keepers of the world. Bee-culture has advanced with rapid gait during the last decade, and as soon as one forward step is taken, it is heralded all over the world through the agency of the press.—MRS. L. HARRISON, in the *Prairie Farmer.*

How to Rear and Preserve Drones.

It is well known to most bee-keepers that colonies having fertile queens will not rear nor permit drones to live in the hive late in the season, and seldom when forage is scarce.

If queen-rearing is going on, drones must be procured at any cost, and some means must be adopted to rear and preserve them for use in the latter part of the season. To do this, the following method is necessary. Have at hand several extra frames of drone comb, insert one in the center of the colony from whose queen you wish to rear them. Feed this colony liberally if forage is scarce.

Examine them in the course of a week; if the comb is well filled with eggs and larvæ, remove it to a queenless colony. Instinct teaches queenless bees the necessity of rearing and caring for drones, hence they can always be depended upon for this, provided the brood is given them.

Replace the comb just removed with an empty one, continue this as long as the queen can be induced to lay drone eggs. Remember that queenless bees never destroy drones, while a colony having a fertile queen will invariably do so, unless encouraged to preserve them by being fed.—A. REUSCH, in *Chariton* (Iowa) *Herald.*

Lighting a Smoker.

We have just learned a new way to light the Clark smoker. We cram it with excelsior sawdust, then close the door tight. We next strike a match on the sandpaper, work the bellows, and then hold the blaze directly against the perforations *under* the smoker, just back of the front legs. The flame will shoot in, ignite the fuel, and the smoker so lighted is almost sure to stay so.

English Ivy and the Bees.

English ivy is blooming profusely about the carved stone newel posts of the terrace stairway in Central Park, and myriads of honey-bees haunt the region. The English ivy is thoroughly domesticated in the park, but of all the climbing plants cultivated in the park, the Japanese ampelopsis, or ivy, is the most satisfactory. It is hiding all the ugly walls about Central Park, and will eventually be trained along the bluff side of Morningside Park, so as to make for that charming strip a solid background of green.—*New York Sun.*

Bees vs. Fruit.

Horticulturists throughout the country complain of bees damaging their fruit. They should remember that it is owing to the services of bees in fertilizing the bloom that they have a crop of fruit. Bees do not tear open the skin of pears, peaches and grapes, but when it is broken by birds or wasps, they suck out all the juice.

Lately I was gathering some grapes, and there was not a bee to be seen upon the bunches upon the vines. The grapes were very ripe, and were easily broken from the stem, and I soon noticed that the basket was lively with bees. Very ripe peaches were not molested unless the skin was broken.

I tried drying peaches in the sun, but I soon found that they were covered with bees, which were sucking out all their sweetness, and removed them to the stove oven.

All that the bees get from fruit does not more than pay them for performing the marriage rite to the flowers. Why begrudge them a small pittance?—MRS. L. HARRISON, in the *Prairie Farmer.*

◆

Agricultural Experiments.

The lack of suitable men has not been the only drawback to the work of the younger stations. Two clauses in the act passed by congress allowing only $3,000 of the first and $750 of each succeeding appropriation to be used for buildings, and requiring that from the very first at least four bulletins a year be issued, while ultimately it may prove of advantage to them, has certainly tended at first to bring them no praise. It was supposed that the states would furnish buildings, but unfortunately some of them furnished either inadequate ones or none at all, and in one or two instances even the annual appropriation which the state had previously given to the agricutural college was abolished.

The fact that quarterly bulletins were required by law, whether the station had valuable matter on hand or not, coupled with the fact that in many instances men wholly new to the business had to write them, tended at first to distribute more or less matter of questionable value. As the bulletins have general circulation among the class for which they are intended only in the state in which they were issued, many states necessarily sent out some compilations on the same topics which, to all practical purposes, were duplicates of each other. Bulletins, too, had to be written in popular style, in order that they might be understood by men whose education, in too many instances, had been limited to the winter district school.

If it be also remembered that these newly formed stations have been organized scarcely three years, and have not been in working order for that length of time; that they are going through the same trials as the older stations have had; that they have to break down the prejudices of many farmers, as the older stations have largely done; and that they were popularly expected to show in a few months results equal to those which even the German experiment stations have conquered only after years of strict application, with the aid of the best scientists of that scientific nation—it cannot be wondered at that these newborn stations have in several instances fallen short of what was expected of them.—Professor Charles L. Parsons in Popular Science Monthly.

Sign of Robbing.

Early in the morning, or late in the evening, as you walk through the yard, if you find a hive that has a lot of cappings, or little fine bits of comb about the entrance, watch it, and as soon as the bees commence to fly, see if robbers are not operating there.—*Canadian Bee Journal.*

◆

Honey-Dew for Winter Stores.

Mr. Heddon, in the Missouri *Bee-Keeper*, says he thinks we have no reason whatever to fear any disastrous results from wintering our bees on stores of honey-dew. He relates an instance of where Dr. Southard, of Kalamazoo, once fed honey-dew to 5 colonies until they had no other stores for Winter, yet they wintered perfectly.—*Review.*

◆

Sugar Syrup for Winter Stores.

I settled this matter satisfactorily to myself the first season I kept bees. One of my neighbors was going to "brimstone" some second and third swarms so as to get the honey, or "take them up" as it was called, and I obtained permission to drum out the bees and put them into one of my hives.

I put four into one, giving them empty frames and about 30 pounds of syrup, and they came out in the Spring better than those that had honey stores. Since then I have frequently fed syrup for wintering bees, and found it to answer as well as the best honey.

Now that sugar has become so cheap, it would pay those that have the time to devote to it, to extract pretty closely at the end of the honey season and feed syrup. Be sure to use the best sugar, to give it in sufficient quantities, and to clean out the combs that are to be used for extracting in the Spring, so that none be left to mix with the honey.—REV. J. CARSWELL, in the *Canadian Bee Journal.*

Bee Journal Posters, printed in two colors, will be sent free upon application. They may be used to advantage at Fairs over Bee and Honey Exhibits. Samples sent free. Write a week before the Fair where to send them.

◆

Clubs of 5 New Subscriptions for $4.00, to any addresses. Ten for $7.50.

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We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

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Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

◆

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

◆

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

◆

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00. For sale at this office.

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The Bee-Keepers' Directory, by Henry Alley, Wenham, Mass. It contains his method for rearing queens in full colonies, while a fertile queen has possession of the combs. Price by mail, 50 cents.

Binders made especially for the BEE JOURNAL for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the BEE JOURNAL (with $1.00 to pay for the same), or 2 subscribers to the HOME JOURNAL may be sent instead of one for the BEE JOURNAL.

YOU NEED an Apiary Register, and should keep it posted up, so as to be able to know all about any colony of bees in your yard at a moment's notice. It devotes two pages to every colony. You can get one large enough for 50 colonies for a dollar, bound in full leather and postage paid. Send for one before you forget it, and put it to a good use. Let it contain all that you will want to know about your bees—including a cash account. We will send you one large enough for 100 colonies for $1.25; or for 200 colonies for $1.50. *Order one now.*

Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ The sewing machine I got of you still gives excellent satisfaction—W. J PATTERSON, Sullivan, Ills.

When Writing a letter be sure to sign it. Too often we get letters with the name of the post-office, but no County or State. One such came recently, and we looked into the Postal Guide and found there were places by that name in 13 States. That order for goods will have to wait until another letter comes to give the proper address. Be sure to stamp your letter, or it may go to the dead letter office.

Pleasant Employment at Good Pay. —The publishers of SEED-TIME AND HARVEST, an old established monthly, determined to greatly increase their subscription lists, will employ a number of active agents for the ensuing six months at $50.00 PER MONTH or more if their services warrant it. To insure active work an additional cash prize of $100 will be awarded the agent who obtains the largest number of subscribers. "The early bird gets the worm." Send four silver dimes, or twenty 2-cent stamps with your application, stating your age and territory desired, naming some prominent business man as reference as to your capabilities, and we will give you a trial. The 40 cents pays your own subscription and you will receive full particulars. Address

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10A8t La Plume, Pa.

HONEY AND BEESWAX MARKET.

NEW YORK, Oct. 10.—Demand is limited, and supply sufficient. We quote: Comb—Fancy white, 1-lb., 14@15c; 2-lb., 12@13c; off grades, 1-lb., 12@13c; 2-lb., 11@12c; buckwheat, 1-lb., 10@11c; 2-lb., 9c. Extracted—Basswood, white clover and California, 6¾@7c; orange bloom, 7@7½c; Southern, 60@70c ⅌ gal., as to quality. Beeswax, steady, 25@27c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, Oct. 10.—The demand is fair, and supply light. We quote: White comb, 15@16c; dark, 10@12c. Extracted, white, 7@7½c; dark, 5@6c. Beeswax—None in market, and demand good, at 23@26c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Oct. 10.—Demand is only fair, with good supply. We quote: Choice comb, 14@16c. Extracted, 5@8c. Beeswax is in fair demand and good supply, at 23@25c for good to choice yellow.
C. F. MUTH & SON,
Cor. Freeman & Central Aves.

NEW YORK, Oct. 10.—Demand for honey is increasing, but is exceeded by supply. We quote: Fancy 1-lb. comb, 15@16c; 2-℔., 14c; fair, 1℔., 13@14c; 2-℔., 13c. Extracted—California, 7c; clover and basswood, 7@7½c. Beeswax—in fair demand, with adequate supply, at 25@27c.
CHAS. ISRAEL & BROS., 110 Hudson St.

CHICAGO, Oct. 10.—Demand is active for white comb-honey; supply limited. We quote: Fancy, 16c; other grades 14@15c. Extracted, 7@8c. Beeswax, quick sale, at 26@27c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Oct. 10.—Demand for honey good, with light supply. We quote: Comb—1-lb. white, 16c; dark, 12c; 2-lb. white, 15c; dark, 10c. Extracted—white, 7@7½c; dark, 5@6c. Beeswax, supply and demand light, at 25@27c.
HAMBLIN & BEARSS, 514 Walnut St.

DETROIT, Oct. 10.—The demand for comb-honey is fair and supply small. We quote: Comb, 12@13c; extracted, 7@8c. Beeswax in good supply, and light demand, at 25@26c.
M. H. HUNT, Bell Branch, Mich.

CHICAGO, Oct. 10.—The demand is slow for 1-℔. comb-honey, with good supply. We quote: Choice white comb, 14@16c. Extracted, 6@8c. Beeswax, in light supply, and demand slow, at 27c. J. A. LAMON, 44-46 S. Water St.

ALBANY, N. Y., Oct. 9.—Demand is improving; supply moderate. We quote: White comb, 12@17c. Extracted, 6@8c. Beeswax, scarce and in good demand at 26@28c.
H. R. WRIGHT, 326-328 Broadway.

NEW YORK, Oct. 9.—Demand good, with fair supply. We quote: No. 1 comb, 16c; No. 2, 13@14c. Extracted—California, 7@7¼c; basswood, 7¼@8c; Southern, 65@70c per gal. Beeswax, supply and demand fair, 26½@27c.
F. G. STROHMEYER & CO., 122 Water St.

SAN FRANCISCO, Oct. 8.—Demand good, supply small. We quote: Comb, 1-lb., 10@13c. Extracted, 5¾@6c. Beeswax, in light supply and good demand, at 24@25c.
SCHACHT, LEMCKE & STEINER,
16 Drumm Street.

CHICAGO, Oct. 10.—Demand is now good, supply is not heavy. We quote: Comb, best grades, 15@16c. Extracted, 6@8c. Beeswax, 26@27c.
R. A. BURNETT, 161 S. Water St.

BOSTON, Oct. 9.—The demand good, supply ample. We quote: 1-℔. fancy white comb, 15@16c; extracted, 7@9c. Beeswax, none in market.
BLAKE & RIPLEY, 57 Chatham St.

MILWAUKEE, Oct. 10.—Demand not very brisk; supply good, and of better quality. We quote: Comb—choice, 1-lb., 15@16c; fair, 13@14c; dark, 10@12c. Extracted—white, in barrels or kegs, 7@7½c; dark, 6@6½c. Beeswax, 25@28c.
A. V. BISHOP, 142 W. Water St.

NEW YORK, Oct. 9.—Demand is active, and supply increasing by large arrivals. We quote: Fancy 1-lb. comb, 14@17c, depending on quality; 2-℔. sections, 2c less. Extracted—White clover and basswood, 6@8c, and supply not equal to the demand. Beeswax—the supply is not equal to the demand, which is brisk, at 26@29c, as to quality.
F. I. SAGE & SON, 183 Reade St.

Premium.—Every tenth subscriber to the HOME JOURNAL who sends a correct solution of the rebus, receives a cash premium as soon as it is received. Here is an acknowledgment of one received on Sept. 30. The check was sent by return mail:

Yours of Sept. 30, enclosing your check for $5 was received last evening. Many thanks for the same, as well as for the remarkable promptness with which you sent it.—MRS. EVA GAILLARD, Girard, Pa.

Red Labels are quite attractive for Pails which hold from 1 to 10 lbs. of honey. Price, $1.00 per hundred, with name and address printed. Sample free.

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CIRCULATES
ALL OVER THE WORLD
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THOS. G. NEWMAN & SON,
CHICAGO, ILL.

Our Club Rates are: $1.90 for two copies (to the same or different post-offices); and for THREE or more copies, 90 cents each.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVIII. Oct. 22, 1891. No. 17.

Editorial Buzzings.

The Proudest Motto for the young—
Write it in lines of gold
Upon thy heart, and in thy mind
The stirring words enfold;
And in misfortune's dreary hour
Or fortune's prosperous gale
'Twill have a holy, cheering power—
"There's no such word as fail."

◆

Laying Workers are got rid of by a prominent apiarist by placing the whole colony over another containing a laying queen, and extracting later.

◆

The Colorado State Bee-Keepers' Association will hold its semi-annual meeting at Arvada, on Thursday, Oct. 22, at 10 a.m.

◆

If You Have any honey to sell, get some Honey Almanacs and scatter in your locality. They will sell it all in a very short time.

The Illinois Woman's Exposition Board is charged with the duty of preparing for the World's Columbian Exposition an exhibit representing the industries of the women of this State. In order to set about this work intelligently, and prosecute it thoroughly, the Board needs the fullest possible information in regard to the part now being taken by women in the industries of Illinois. Every woman in the State who is engaged in any profession, craft or other industry, is earnestly requested to send her name, address and occupation to this Board. With this data the Board would be best able to plan the exhibit and reach the possible exhibitors.

◆

World's Fair.—The general passenger agents of twenty of the railroads entering Chicago have organized a special association for the determination of excursion rates to the Exposition, and for arranging facilities for caring for the enormous crowds of visitors to the World's Fair.

◆

Mrs. L. Harrison, commenting upon the Illinois State Fair in the *Prairie Farmer*, says:

> To-day (Sept. 28) I have been upon the grounds all day, and met a few bee-keepers who were placing their honey and bees upon exhibition. There is more honey and of better quality than I expected to see. Quite a large exhibit came from Iowa.

◆

When Writing a letter be sure to sign it. Too often we get letters with the name of the post-office, but no County or State. One such came recently, and we looked into the Postal Guide and found there were places by that name in 13 States. That order for goods will have to wait until another letter comes to give the proper address. Be sure to stamp your letter, or it may go to the dead letter office.

◆

Clubs of 5 New Subscriptions for $4.00 to any addresses. Ten for $7.50.

Rain Making is now absorbing universal attention. When protracted drouths have so often destroyed the honey crops, apiarists are interested in this discussion, as well as the general growers of the crops. Relative to the credit for the suggestion put in by Mr. Penfield, on page 276, the following has come to hand:

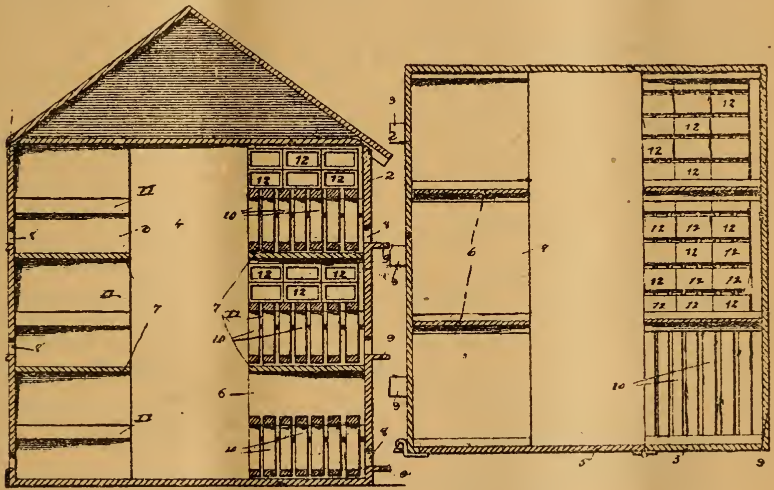
> I think if you will look over the BEE JOURNAL for the latter part of 1887, you will find very good replies to Hill's and Penfield's articles on causes of drouth.
>
> I saw replies referring to large scopes of country where there were numerous lakes, etc., and yet they were subject to drouths. Judging from newspaper reports sent in by some of the good citizens of Texas, the experiments made in that State to cause rain, has by no means been a success.
>
> Nokomis, Ills. E. SANDFORD.

This reminds us of a story about making rain some 40 years ago, which we copy from the San Francisco *Examiner*. Here it is:

> Making thunder-storms to order is not such a new scheme as Frank Melbourne and the Government balloon dynamiters seem to think. Forty years ago it was tried successfully in California, and a drouth was broken without resort to explosives or expensive chemicals. An old Indian did the trick at no cost other than the expenditure of a little breath and mental effort. At least such is the statement made by S. A. Bishop, one of San Jose's most prominent citizens.
>
> Mr. Bishop, in 1850, established the Tejon Indian Reservation at the southern end of the San Joaquin Valley, under the directions of Gen. E. F. Beale, Superintendent of Indian Affairs in California, and gathered at Tejon a large number of Indians, whom he instructed in agriculture. The Indians took kindly to the work, and during the first season they plowed and sowed with wheat, a field seven miles long by a mile in width. In March the rain ceased, the weather became very warm, and for two months not a drop of rain fell. The drouth threatened to ruin the wheat crop, and Mr. Bishop decided to try irrigation.
>
> Five hundred Indians were set at work in four six-hour shifts, digging ditches to concentrate a number of small streams, and conduct the water to the wheat field. It was hard work, and, therefore, distasteful to the Indians.
>
> One day the head man waited upon Mr. Bishop, and represented to him that it was foolishness to do so much hard work when rain could be had for the asking. They wanted permission to send to the mountains for a medicine man, who could produce rain by speaking a word.
>
> A messenger was sent on muleback to the home of the chief of a small tribe living about 100 miles from the reservation.
>
> At the end of five days the messenger returned and reported that the rain-god and his whole tribe were on the road to the reservation.
>
> The news of the arrival of the great rain-maker was sent abroad, and at least 30,000 Indians gathered at Tejon to greet him.
>
> Mr. Bishop propitiated the rain-god with a quart or two of red beads, and then interviewed him on meteorology.
>
> "Can you make it rain?" he asked.
>
> "Did you not send for me for that purpose?" said the old chief.
>
> "Yes," rejoined Mr. Bishop, "but I would like to know whether you can do it."
>
> "If I could not do it I would not have come," replied the old chief, and, although Mr. Bishop was not convinced, the logic of the reply was unanswerable, and he dropped the subject.
>
> The Indians spent that night in dancing and feasting, eighty bullocks having been killed and barbecued for them, and the next day the rain-maker said he was ready to begin operations.
>
> The Indian, retiring into the bush, went through some mysterious evolutions. Mr. Bishop says he was greatly amazed to see clouds begin to gather in the sky, and his surprise increased when a few drops of rain fell. But the Indian soon came out of the bush and declared that he could not be sure of a good shower until he could produce thunder and lightning, and he intended to go into a grove not far away and try some new incantations.
>
> The Indian retired, and in less than half an hour the artillery was turned loose. There was a blinding flash of lightning and a roar of thunder that shook the earth, and then the rain came down in torrents. The old Indian's shower lasted for ten days, and the ground became so soaked that the cattle mired down on the plains.

A Bee-House is just patented by W. G. Rutherford. His description and claim is thus given in his patent:

The bee-house shown and described, having a door and provided with a central passage-way. The vertical cross-partitions secured to the inner faces of the side walls, and dividing the same into sections accessible to the passage-way; the longitudinal horizontal division-boards secured to the vertical partitions, and dividing the spaces between them into hive compartments; the side walls opposite each compartment having a bee-opening and an alighting-board, the horizontal strips 11, secured to the vertical partitions in each compartment, the brood-frames suspended from the strips, and the honey-sections arranged above the brood-frames, and being supported by the same in each compartment, substantially as described.



W. G. RUTHERFORD'S BEE-HOUSE.

◆

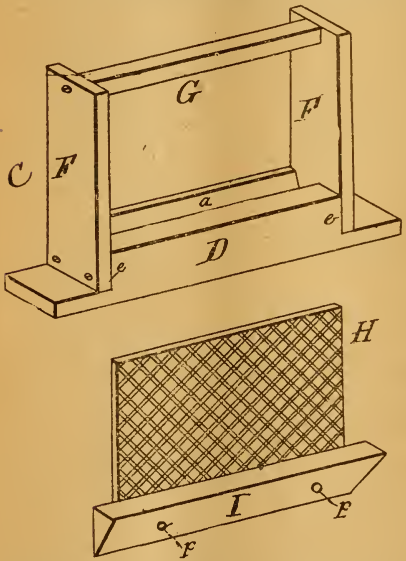
Alfalfa is a plant which promises to be one of the great sources of wealth in this country. It is cultivated extensively in California, Utah and Colorado. It produces three crops a year, and an extraordinary tonnage per acre. The November *Cosmopolitan* contains an article by John Brisben Walker, who was for ten years an alfalfa farmer in Colorado, and prominently connected with the introduction of alfalfa into that State, beginning with a few acres and experimenting until his crop exceeded 3,000 tons per annum. During this time, Mr. Walker practically superintended his extensive farm, including the construction of ditches and practical irrigation, and harvesting of the plant. He believes that "over at least one-third of the territory of the United States, alfalfa may be grown to so great an advantage that it is doubtful whether any other crop can equal it in productiveness." He describes the process of sowing, irrigating, and curing alfalfa. Of the pleasures of farm life, he writes:

You who are in the cities, shut up in dingy offices, racking your brains on Wall street, or compelled to walk through streets walled in by dingy houses—you do not envy, perhaps, the very different work which these men have just begun—these men holding forks and pitching heavy loads of new-mown hay into the air and onto wagons, or from wagons onto stacks. If you do not, it is because you do not know; it is because Providence has never permitted you to stand in a field with more than a hundred miles of snow-capped hills stretched out before you, and wafting down upon you breezes, the like of which blow nowhere else; where the sunstroke is unknown, and where every breath is life. Around, the green plains and fertile valleys; above, an ever changing panorama, never the same for two hours at a time.

Grubb's Frame.—The following comes from a subscriber seeking information :

> Mr. O. H. Cobb, in the American Bee Journal, refers to the Grubb patent described on page 168. On turning to the description I fail to see its utility, or how the foundation is held in place.
>
> The letters on the engraving are not explained. I would like to understand how it is to be used before knowing if I should like it.
>
> If you would give a little more definite and particular description it might benefit some others that may be as dull of comprehension as myself.
>
> Pleasant Hill, Ills. A. Mosher.

In order to answer the questions propounded by Mr. Mosher, we must refer to the engraving again. The frame stands on its top bar D. The second engraving shows the sheet of comb-foundation H, attached to a V-shaped wedge I, and the whole is intended to slip into the place marked *a* in the upper engraving. It is to be nailed in (at *p*), and then by turning the frame with the top-bar upwards, the comb-foundation will hang, just like it does in other frames. Just turn the page upside down, and you will see it at a glance. D is the top-bar ; F F are the sides, and G the bottom-bar. It is an old method, and is not worth the trouble and cost of fastening comb-foundation to the frames in that way.



◆

Conducting Experiments.—A correspondent lately sent us the following communication :

> Can you not suggest a way to secure a competent man to conduct a series of experiments for the benefit of bee-keepers ?
>
> There are always some important questions under consideration by your correspondents and readers, and if we can have some careful experiments, made impartially, it will be a great help towards solving many disputed questions without each of us having to make a costly trial of various theories that we want to understand.
>
> Can it not be done by publishers assuming the responsibility, and adding the cost to the price of publications ? Or through some society ? Do the bee-keepers generally want such a station established ? Hugh L. Lynn.
>
> Glenville, Ky.

We think it would be far better to let the North American Bee-Keepers' Association appoint an experiment committee, and have the whole matter of experiments in charge, requiring a written report from the committee at each annual convention. That would be a national committee, and its reports would have some weight.

If these matters were left to the editors of bee-periodicals, each one would act independently, and no uniform decision would be possible.

Then, again, it is quite probable that no such experiment committee is desired by apiarists generally. We would respectfully refer the whole matter to be discussed at the next meeting of that association, at Albany, N. Y.

◆

Another new bee-paper is born, but the crime of robbery is stamped upon its face. With many appropriate names at hand, it adopted, without excuse, one by which an old-established bee-periodical is universally known. Success, under th circumstances, it cannot expect, and all honest persons will refuse it recognition.

Queries and Replies.

Treatment of Candied Comb-Honey.

Query 789.—1. What can be done with fifty cases of one-pound sections, white comb-honey that has candied? 2. Can it be left in the comb and become liquid again?—I. O. U.

2. We think not.—Dadant & Son.

No; put it into a sun extractor, and melt it.—Mrs. L. Harrison.

1. Sell it for the very best figures obtainable. 2. No.—J. M. Hambaugh.

1. Melt it, and take off the cake of wax. 2. I do not think it can.—C. C. Miller.

1. Melt it, and thus separate the wax from the honey, or eat it as it is. 2. No.—M. Mahin.

1. I see no way other than to melt it, or feed it to the bees. 2. I cannot see how.—A. J. Cook.

1. Put in a sun wax extractor and melt, when you will have nice liquid honey, with the wax on top. 2. No.—G. M. Doolittle.

1. It can be sold for what you can get, or melted up; selling the honey liquid, and wax solid. 2. It will not liquefy in the comb.—James Heddon.

1. Liquefy it as you would extracted-honey that is candied. The comb will melt, and can be removed, as a cake of wax, when cool. 2. No; it will never become good comb-honey.—R.L.Taylor.

1. I would suggest placing it in a very warm room—as warm as can be made without melting the wax—for a few days. Keeping honey in a warm room tends to prevent candying.—G. L. Tinker.

If it is not salable in the comb, I should melt it, and perhaps add a little water, to give it the consistency of thick extracted-honey, and put it into honey pails. Of course, save the wax.—C. H. Dibbern.

I would melt the candied comb-honey you describe by the use of my solar wax extractor. It has a cylindrical wax pan, and does the work better than anything ever before devised. With a bare market, and good demand last year, why was it allowed to candy?—G. W. Demaree.

1. If you want to save the honey, the only plan that I see is to cut the combs out of the sections, and melt them over a slow fire, taking care not to burn the honey. The wax will rise to the top, and can be skimmed off.—J. P. H. Brown.

1. I know of nothing more practicable than to use it as it is. It can be heated, and thus liquefied, but in either case the comb will be destroyed. Adopt whichever plan will produce the most cash. 2. It will not liquefy in the comb if left there.—J. E. Pond.

1. I am trying a plan this year, which, at the present writing (Aug. 8), offers a little encouragement. I piled some supers of last year's granulated honey, 3 or 4 deep, on top of colonies which had cast swarms. My idea was that during August the heat would liquefy it. Perhaps a warm room would accomplish the same end.—Eugene Secor.

1. A good many things. It may be given to parties who love honey, but are too poor to pay for it; it may be sold to parties who like such honey, or the honey and combs may be melted in a solar wax extractor, and then you will have some nice beeswax and extracted-honey. The wax will cool on top of the honey. 2. It will not become liquid if left in the comb.—A. B. Mason.

It cannot be liquefied in any manner so as to save the combs, and it is useless for ordinary table use. Some like to eat it when candied, and that is the only disposition that can be made of it without liquefying. It can be melted and allowed to cool; the wax will then form a cake at the top. This can be removed and marketed, leaving the liquid honey for use or sale, according to opportunity or desire of the apiarist.—The Editor.

The Wintering Problem in Bee-Keeping; an Exposition of the Conditions Essential to Success in the Winter and Spring Management of the Apiary, by G. R. Pierce. This is the title of a new pamphlet of 77 pages, just issued by the author, who has had 25 years' experience in bee-keeping, and for the past 5 years has devoted all his time and energies to the pursuit. Price, 50 cents. For sale at this office.

Trees, Flowers and Birds.

Two men toiled side by side from sun to sun,
And both were poor ;
Both sat with children when the day was done,
About their door.

One saw the beautiful in crimson cloud
And shining moon ;
The other with his head in sadness bowed,
Made night of noon.

One loved each tree and flower and singing bird
On mount or plain ;
No music in the soul of one was stirred
By leaf or rain.

One saw the good in every fellow man,
And hoped the best ;
The other marvelled at his Master's plan,
And doubt confessed.

One having heaven above and heaven below,
Was satisfied ;
The other, discontented, lived in woe,
And hopeless died.

—Boston Evening Transcript.

Topics of Interest.

Claiming the First Bee-Escape.

JOHN W. SILCOTT.

I am informed, through the BEE JOURNAL (page 405), by Mr. Dibbern, that I am mistaken in claiming the first bee-escape, as I did on page 369. He says that the first bee-escape was patented in 1860. This is the first knowledge I have of any bee-escape, patented or otherwise, prior to 1882. A patent of 1860 would have expired before 1882, and, therefore, would not invalidate one of that date. I do think that if the two are alike in general principles, the Patent Office officials committed an error in allowing a patent on the same thing the second time.

I will now give what is claimed by the patent of 1882, so far as it relates to bee-escapes: "In order to eliminate the bees from the honey-boxes, I employ a glass-covered conductor, H, which has open communication with the honey-boxes through the aperture C, and to the brood-chamber through the aperture K. Within this conductor H is arranged a cross-bar i, having aperture i′, in which operates the tongue I′ of the plate I, pivoted within the sides of the conductor.

"The entrance to the honey-boxes having been closed, the bees find their exit through C into the conductor, thence under the plate I, which allows of their passage, but prevents their return, and thence through K into the brood-chamber."

There is another cross-bar shown in the drawing, but not mentioned in the specification. The conductor, as it is here called, is the outer case in which is arranged the working parts of the bee-escape, with the entrance at or near one end, and the exit into the brood-chamber at the other. The cross-bar, with an aperture about one-half inch in length, and full bee-space in width, is secured to the sides of the conductor in an upright position, with the aperture lengthwise of and parallel to the floor of the conductor.

The plate is delicately hinged behind this cross-bar, but not in contact with it, and at an acute angle with the raised floor under the plate. The front edge of the plate stands directly behind the aperture in the cross-bar, and divides it lengthwise into two half bee-spaces. It is this division of the bee-space, by the edge of the plate, that prevents the return of the bees from the hive side.

The second cross-bar, with projecting arms, is only used to protect the hinges; the arms to regulate and keep the edge of the pivoted plate at the desired point.

If rightly understood, it will be seen that this bee-escape has only three inside pieces. The cross-bars and raised floor protect the edge of the plate from propolis, and from the force of the bees from the hive side, in their efforts to return. It will also be noticed that the bees from the surplus cases have only to raise the plate half a bee-space to get from under it, and at the same time pass out through the aperture in the cross-bar.

Mr. Dibbern says that from my description of the bee-escape, on page 369, he judges it to be antiquated and worthless, and instead of the patent covering modern bee-escapes, it is quite likely it is covered by the patent of 1860. I do not understand how he could judge of it correctly from my former description, as I did not give any description of it except to say that it had a pivoted plate over a raised floor. Now, if my bee-escape is so antiquated and worthless, why does the inventor of the new and only successful bee-escape use the conductor with an entrance at or near one end, and the exit at the other, and seven sections, forming three cross-bars and four apertures? I have taken this view of his bee-escape from the cut in his advertisement, and do not think that I have erred in my judgment.

This arrangement of Mr. Dibbern's is not new to me, as I tested this principle of bee-escapes years ago. I failed to prevent the return of the bees—at least a part of them—over the same route, it mattered not how circuitous and complicated it was made.

And why criticise other complicated traps and springs, when he speaks, on page 302, of one of his new bee-escapes, made out of broom-wire, on the floodgate principle, and says it has stood every test. I do not understand how it is made, but I think it must be somewhat complicated.

I also see from Mr. Dibbern's article, on page 302, that he does not like the spring bee-escape. So far as I can judge from the cut in the advertisement, and from what others say about it, I think it a good one. The spring arrangement inside of the case is new to me.

The bee-escape described by Mr. Wilcox, on page 373, is a very good one, and the simplest of all, as there are no inside parts to obstruct the bees in passing through it (I had tested the very same before), but I as often find the bees as slow and stubborn to leave the surplus case through it as any other, and have had robber bees attracted to the point of exit, after they had been open some time, in these slow cases, for the bees to leave the surplus apartment.

In some cases a simple conductor answers for a bee-escape—all that is necessary is to remove the surplus case as soon as the bees are out, and before they commence to return, but these are exceptional cases, and occur only when the bees in the surplus cases become, in a short time, very restless when separated from the brood and queen.

For years I have noticed the difference in time required to get bees of different colonies to leave the surplus cases by any method employed. For instance, take them to a dark room and let them fly to the light, and the difference in time required for them to leave will be noticed. Or, late in the evening, turn the surplus cases upside down on the ground under the hive, and connect by a stick from the case to the entrance of the hive. The bees in some of the surplus cases will take to the stick and soon leave the case, while others will remain quiet, and be found the next morning guarding their honey. This same difference in time is found when using bee-escapes.

From what I have learned in the past ten years about bees in their relation to bee-escapes, from many tests and the practical use of them, I am led to the conclusion that no bee-escape can be made that will free the supers of bees at a stated time.

A bee-escape that will allow the free passage of the bees from the surplus cases through it when they are ready to leave, and prevent their return, and remain in perfect working order two days, is all that is required. I do not see that it makes any difference as to the time required, especially if at the end of the honey harvest. I find a good bee-escape one of the most useful devices used in an apiary. It matters not what may be said hereafter about bee-escapes, this is my last on the subject.

Snickersville, Va.

Women as Bee-Keepers.

JULIA ALLYN.

There are many things about bees that are not well understood, although there are some young bee-keepers who have explanations ready for anything that arises. There is a part of bee-keeping, however, that all bee-keepers do not study enough, and that is encouraging the bees to work in the surplus sections.

If bees, like human beings, differ—and it is reasonable to suppose they do—then some colonies must have different treatment from others.

A colony, given 56 one-pound sections to fill, may enter upon the work immediately, swarm into the empty chamber, the second story of a double hive, and appear to delight in this great addition to the working space. On the other hand, however, a colony given equal space will not enter the surplus chamber as quickly. It appears to hang back, to dread the work of filling all that space with honey. These 2 colonies, then, are not alike, and must be treated differently.

Reader, if you live in the country, you may remember that when, in youth, you picked huckleberries, you did not pick into a six-quart pail; you gathered the berries in a pint dish and emptied them into a big pail. Perhaps bees—some bees—have similar ideas (if they have ideas) in regard to gathering honey. When they are admitted into a second-story surplus chamber, in which is to be packed 56 pounds of honey, may it not appear to them as a great undertaking?

At all events, when there was a manifest disinclination to enter the surplus chamber, the bees have been induced to begin work by contracting the surplus chamber, giving the bees at first only one or two frames of comb—8 or 16 sections. Over these was poured a little honey, just enough to run across the combs, and drip a little into the brood-chamber. The bees immediately followed up these little streams to their source, and the work of storing surplus honey began. This has often been done, and resulted exactly as represented. Bees are indeed "strange creatures."

A woman just beginning bee-keeping neglected to remove the board between brood-chamber and surplus chamber. The hive stood about a foot from the ground, on pieces of timber set under each end of the hive. The bees, unable to enter the surplus chamber, went under the hive and built comb on the bottom-board.

Bees do not need continual attention. They often have too much; but at "starting points" here and there during the season, a little help or interference enough to turn the tide in the right direction, will be advantageous.

Wherever women have exhibited bees and honey, great interest has been manifested, and many questions asked. No class of women are more independent, or capable, or willing to be independent, than the farmers' wives and daughters. A large number are not satisfied with present acquirements. They are uneasy—especially the daughters, who are weighing the merits of the country against those of the city, and are trying to find something to do at home, that they may stay at home, and yet be independent and thrifty.

Now, when the farmers' daughters attend the fairs, and see some persevering woman exhibiting bees, and talking about them with such interest and enthusiasm, a new life may open, or a new way in the old life may appear, that will present to them an opportunity they have long sought. Therefore, every woman bee-keeper should make an effort to make an exhibit which will be to her benefit, as well as to others. Out of the throng may come some inquirers who will be sent on their way rejoicing.

Some women cannot keep bees, any more than some men; but many can, and to their great profit. Often a farmer's wife or daughter welcomes an occupation for the sake of its novelty, something to break up the routine of cooking, washing and sewing; and bee-keeping, even if it brings only a few pounds of honey for the table, is undertaken and carried through with pleasure and delight.—*New York Independent.*

Breeding "Yellow" Carniolan Bees.

HENRY ALLEY.

I desire to thank Mr. J. A. Green for the sensible, able, and fair manner in which he treated the above subject on page 466 of the AMERICAN BEE JOURNAL. I am glad to find one person who can discuss this question, and treat me as Mr. Green has. There was no necessity for using the words "humbug," "fraud," etc., which nearly every writer, but Mr. Green, who undertook to debate this subject, has used.

I will show wherein Mr. Green is wrong on some points, and then drop the subject. Mr. Green says:

> "The explanation of this is furnished by Mr. Alley himself, when he tells us that these queens were mated in an apiary but little over a mile away from a large apiary of Italians. Now, it is agreed by most authorities that the meeting between queen and drone may take place at some distance—a mile or more—from the hives. If they flew only a mile away, apiaries would need to be at least two miles apart to keep them distinct. I have evidence which I consider conclusive that different races will intermix if kept *four* miles apart. More than this, I believe—and this belief is shared by many—that a queen is more liable to be mated with a drone from an apiary a mile away than from the one in which she was reared."

This is all wrong. I believe I have had as much experience in the matter of fertilization of queen bees as any man in the world. I have had Italian queens fertilized within one-fourth of a mile of a large apiary of black and hybrid queens, and though this was before the invention of any arrangement for catching and destroying drones, not one of those queens was mismated. The inexperienced bee-keeper is the only person who will make such statements as the above.

I want it understood that there were as many Carniolan drones in the Carniolan apiary as there were Italian drones in the Italian apiary. I never use the drones of but one colony in any of my queen yards, no matter how many colonies of bees there are. Drone-traps are kept on all but one hive.

Now, friend Green, if the Italian drones would fly 2 miles to meet the Carniolan queens, why would not the Carniolan drones fly the same distance and mate with the Italian queens?

Would there not be a general mixing of the races under the circumstances?

One question here for friend Green to answer: Can you explain how it is that Italian queens mated in a yard with dark Carniolans, and, also, dark Carniolan queens mated in a yard with Italian drones, both produce only good—yes, beautiful—Italian bees? I wish you would explain this.

One more point, and I am done. Mr. Green says:

"To sum the matter up, the "golden Carniolans" have been produced by crossing Carniolans with Italians, then breeding for yellow bees."

No; they were not. I deny the statement in toto. I have explained how they were produced, and have informed the readers of the BEE JOURNAL of the method by which any one can reach the same results.

I do not see why such statements should be published. Go and make the experiments according to my advice; then if you cannot produce yellow Carniolans, it will be in order to dispute my statements. Until this has been done, it seems to me that all who deny my statements are decidedly out of order.

Now, friends, treat this subject with more fairness. Do not continually cry "fraud" and "humbug," until you have made an attempt, by actual experiment, to disprove my statements.

Wenham, Mass.

Frames Instead of Hives.

G. M. DOOLITTLE.

I have carefully read over the leader in the last *Review*, and read the article by our friend Gravenhorst over and over again, and have tried to place myself right alongside of friend G. in all of his manipulations, going through them as near as any one can in mind, and in this way trying to get in just the position which he and the editor of the *Review* occupies, to see if there was in reality a "shorter cut across apicultural fields" than the "round about way" I have been traveling.

Well, after turning this thing over and over in my mind; after taking all the steps with friend G. which he takes, and then coming back and taking my own steps over again, I think I see just this difference between the two methods: friend G. and the editor take the "short cut" across the field, while I go around; but in the field there is a high hill, and they on their "short cut" climb up over the hill and down on the other side, while I go around, going perhaps the same distance, but save the climbing up and the holding back coming down which they have to do.

In other words, I do not see where the average bee-keeper, using the regular Langstroth frame, need do one particle more work to secure the same results that can be obtained with any other hive, while by using this Langstroth hive, which he already has, he saves the climbing up (getting new hives, and making of the same, etc.), and also saves the holding back (necessary cash which such a change of hives will require).

Knock the bottom-board off the Langstroth hive, if it is a fast-bottomed hive, and you can manipulate it to just as good advantage after the bees have been in it a year as you could a box-hive or the Gallup hive, or the divisible brood-chamber, and this I say after having used the divisible brood-chamber hives for the past three years. To tempt me to adopt a thing, the "short cut," when viewed from all sides, must be a *short cut*, not something that lies parallel all along the way of the long route, yet having a different aspect. When I commenced to use the shallow frames necessary to the divisible brood-chamber, I so made them that should I ever desire to go back, two of them could be put together so as to make one of my regular frames again, and after using them for three years, this Summer found me making the 300 back into 150 again, so that to-day finds me without a single, half-depth frame in my yard.

Why did I do this? Because I could not secure any better results, taking all in all, than I could with the others. To be sure I could control swarming almost entirely by a proper manipulation of the brood-chamber; could shake out the most of the bees and the queen; could clip the queen-cells, by turning up the hive and driving the bees out of the way with smoke; could spread the brood by transposing the parts of the hive; contract the hive for swarms by hiving them in only one part of the brood-chamber; but when the end of the season came around, I could not see that it took any less work, or that I had a pound more honey to show for it, than by the old way, or with the hives I had been using for the past 20 years; so I said, "I can see no saving here, but I can see a pile of work and expense in changing hives if I go on and adopt this short-cut (?) plan.

Now, I will say this, that had I fifty colonies in these divisible brood-chamber hives (if I could winter the bees in those hives—so far I have failed in wintering to any degree of satisfaction in them), I would not change and adopt any other hive, and had I the same number in the Langstroth hive, the Gallup or the Quinby, I should stick to them; for any one who can make a success of bee-keeping at all, can make a success with either, for all are good hives. Because a hive has frames in it, it does not necessitate handling them all the time; neither does it follow that it is necessary to handle the frames to know the condition of the inside of the hive, for it can all be done in the manner pictured out by Mr. G. and in the leader. The question lies right here, is it any easier, or is it any shorter cut in cutting out drone-comb, to turn the hive over, rig a tool that will go in between the bottom-bars of the frames, and work away, largely by guess, *a la* Gravenhorst, and finally have to handle "one or two frames" to secure perfect combs, than it would be to commence and handle the combs (where needed) on the start? Is it any less work to shake away on a hive until the queen is shaken out, and a lot of bees hunted over to find her, and the hive put back in place again, than it is to quietly sit on a stool and lift out the frame she is on, see her and know what she is doing, and place the frame back in the hive again? And so on to the end of the chapter with all the *necessary* operations in the apiary. If so, then I have handled the divisible brood-chamber hive for the last three years in vain.

It is easy enough to write up a reform on paper, but what we want is reform in practice. My bees, with the use of the hands and brains of one man, have paid me $20,000 during the past 20 years, as I have hired no help to produce this result. Has any one, single handed, done better with their bees? If so, I am glad of it; and if any one will tell me how I may make $1,500 a year, with these same hands and brains, out of bees, with no more exertion than formerly, I shall be glad and thankful to hear how; but if I am to put out $500 or $600 into something which will only give the same results attained in former years, then I say no, I thank you, gentlemen; I will put the $500 into something where it will bring me interest to show for it.

I presume in the past I have allowed it to appear that I handled frames more than I really do. Three times a year, at the outside, is all that is necessary to handle the frames in a hive having a colony in normal condition, and yet I often do more than this. I am still an enthusiast, my wife often saying I had rather work with my bees (I call it play) than to eat my dinner, and this undoubtedly has had something to do with my manner of writing.

Now, do not anybody go and report that Doolittle is worth $20,000. I only said the bees had given me a salary of $1,000 a year for the past 20 years.—*Review.*

Borodino, N. Y.

Correct Apiarian Nomenclature.

JOHN HEWITT.

Mr. Editor:—Replying to your letter of July 28, in which you refer me to page 72 of the Bee Journal for July 16, because I had objected to your altering my words "stock" and "swarm" into "colony," I submit that your authority quoted on page 72 does not apply, according to which "a number of animals or plants living or growing together," applied to bees, can only mean a *queenless* and *broodless* lot. "Colony," strictly speaking, means a company of people transplanted from their mother country, and remaining subject to and depending on the mother country for a governor or viceroy. If this is applied to bees, it clearly means a lot without a queen, depending on the mother or some other stock for one.*

You do not like the word "family," see Bee Journal for June 25, 1884, page 404; nor "nation," see July 16, 1884, page 460; yet "colony" is clearly not so applicable.

When language is used, it is to convey ideas from one person to another, although one cynic has said it was to conceal our thoughts, and when any particular language is used, we must conform to the authority of the country whence it originates; hence, French is that which is fixed at Paris, not Montreal; Italian, at Florence; and English at Oxford and Cambridge.

The best American writers have made a point of first studying the English language, and the result is, there are somewhat more writers of pure English in America than here, and we naturally give them their just credit, but having done this the rank and file think we admit that everything written and said in America is correct English, and they do not forget to impress this notion on us when they pay us a visit, by talking through their noses, instead of their mouths.†

The English language has been built up from a number of sources, with the result that some words have two totally different meanings: *e. g.*, "raze," to level *down*, and "raise," to lift *up;* "air," part of the atmosphere, and "air," a tune, etc. "Blanket" is named after its inventor, Thos. Blanket. An India rubber water-proof coat is called a "Macintosh," and so on. Thus, the word "stock" has a number of meanings, regarding some of which Mr. S. Corneil (BEE JOURNAL, June 11, 1884, page 371) is wrong. Village stocks are probably so named after the originator—one Stocks—or they may have gotten this name from two pieces of wood being used, as "stock" means a thick, or the thicker, piece of wood, and "stick" a thin piece. "Stuck" and "stick" quoted by Mr. Corneil, do not apply, as these words mean fixedness, as "I will *stick* this bill on that wall," and "I *stuck* that bill there."

The "stock" of a gun simply means the *wooden* part; the "stock" of a tree, the thickest; a "stock" (of wood) a thick piece. "Stock" also means the *bulk, i. e.*, something to draw a portion from; thus a merchant will give a "stock order"—that is, he wants the things on hand, in case they are wanted—and he will quote, "I have them in stock," or "they are not in stock," and so on, to his customers. He does not put such goods on the shelves, to remain *fixed* there; the shelves themselves, fixed machinery, etc., are called "stock in trade," but the goods he has to sell are called "stock."

The word has also the meaning of something fixed, to yield a profit, such as the capital in a railway is called "stock"—that, is a profit is expected every year, without reducing the original; this meaning is universal wherever the English language is attempted to be spoken; it certainly is universal all over the British Isles, and has been so for hundreds of years.

Thus, a farmer will speak of the money he has sunk as his "stock;" the seeds, etc., which he wants for sowing or planting, over and above what are for sale or use as "stock," and it is entirely in this connection that "stock," is used to mean a hive of bees—that is a hive of bees for "seed" or profit—and being universally used all over the British Isles, and by all our best writers, ancient and modern, and endorsed by both Oxford and Cambridge, as being correct, shall any one in America say it is not?

In order to better understand the word, let me explain that up to a short time ago—and in many districts it still is so—bees were "took up" for their honey (that is, all hives not wanted for *stock* were suffocated with brimstone, and their honey appropriated), hence such reserved hives are called "stocks," because on them depended further swarms, the year following, to suffocate. Let this be borne in mind, and all will be clear. The stand which they were "stuck" or "fixed" on, has nothing whatever to do with it. (See your reply to Mr. Corneil, BEE JOURNAL for June 11, 1884, page 371.)‡

The following year, the first swarm is called a "swarm;" a second swarm, a cast;" a third swarm, a "colt." A swarm from a swarm, is called a "virgin swarm;" but the old stock hives are still called "stocks" up to taking up time; so that when a man tells me he keeps 10 stocks of bees, I know instantly that this is the number he winters.

Contrast the beautiful simplicity of this with the language of an American who wants to convey the same idea, which will be something like this: "I commenced the season with 6 colonies, they have increased to 18, being an increase of 200 per cent.," etc. Sometimes he will let out, somewhere, that he lost a certain number in the Winter; but seldom does he say how many "stocks" he commenced the season with—*i. e.*, the Winter.

A Briton counts from the Fall, and we know instantly how many were his loss, or how much his rate of profit on his stock. An American counts his "colonies" in the Spring, and his increase or profits on these only.

"Swarm" may be applied with a prefix of "second," "third," etc., to any swarm, but the first swarm from a stock is only entitled to this name; thus, hives of bees are called stocks, swarms, casts, colts, virgin swarms, etc., until taking-up time, and who shall say that this is not better, in these days, when so much has to be paid per word for telegrams and advertisements, than "parent colony," "full colony," "an established colony," "a 10-frame colony," "an established second swarm," etc., for bear in mind the word "stock" means a well established family of bees in normal condition, well found in every respect. When the apiarist selects such of those as will safely Winter, to the number he wants for *stock*, the rest are called "condemned hives"—*i. e.*, either for the brimstone pit, or that modern institution, called "a bee-driver" (a man who goes around and takes or drives the bees out of their hives, taking them with him and leaving the honey, combs and hives behind for their owners).

I think I have made it clear that "stock" is correct, when referring to a well-established hive of bees in normal condition, capable of yielding a profit; and swarm for one that is a first swarm, but is not established, though it may be so, and correctly called a "stock" as soon as it is.

A very small lot with a queen may well still be called a "nucleus," but colony, can have only a general application, like using the word "individual" for all varieties of the *genus homo*. How would it look to say, "A 6-year-old female individual," instead of a "girl," etc., for girl, boy, man, youth, woman, matron, etc.? Yet to use "colony" always is just as bad.

The mistake heretofore has been in trying to substitute some other word for "colony." What I contend for is when a stock is referred to, say a "stock," when a swarm, to say a swarm, etc., and leave "colony" for a general application, but here I prefer to say "family of bees," or "hive of bees," as more proper. Still applied *generally only* there cannot be much objection.

I am not giving all this as my ideas, but what is understood and used as correct English all over the British Isles, and while English is the national language of the North American Continent, I think it ought to be used there, too.

Sheffield, England.

[*Mr. Hewitt is entirely mistaken when he defines the word colony as "a queenless or broodless lot." We admit that when applied to humanity the word colony means "a company of people transplanted from their mother country," etc., but we were discusing its use when applied to bees, and there that definition is totally inappropriate!

When a lot of human beings leave a parent country to establish a colony in another land, it leaves the reigning family behind, and sometimes accepts a viceroy to govern them. But in some cases, as the "American Colony in Paris," for instance, it has no one, in particular, to rule, and each individual is amenable to the laws of the country where the colony is planted. We have many such colonies in America.

When a "swarm of bees" leaves the old hive, it takes the old queen along and organizes a "colony" with the same old mother (not a viceroy) at the head, allowing the old colony to care for the *new* queen. There is no parallel between the two cases, as to the queen! No fitness in the argument!

†This unkind fling at Americans is ungentlemanly and unjust. Some Americans, on account of catarrhal affliction, speak with a nasal twang, but it is very far from a general complaint.

‡We all know that the word "stock" has numerous meanings, and hence the long explanations are totally unnecessary. Whatever may have been the result of the article quoted by Mr. Hewitt, we now hear no more of the "fixed" foolishness!

Mr. Hewitt hints that only an Englishman could be expected to correctly define the English language. In this we do not agree; but if that should be a *sine qua non*, it would not debar the editor of the American Bee Journal, for he was born, reared, educated, married, and for years actively and successfully engaged in mercantile business in England.

Nearly 40 years ago he migrated to America with an English queen, and successfully established a "colony" here, which has also sent out 3 flourishing "swarms" and founded 3 more "homes," gathering honey, rearing young, and storing surplus for coming years. He may thus be able at least to stand on a level with Mr. Hewitt in this.

The philology of the word "colony" is against Mr. Hewitt's argument. It is derived from the Latin word *colonus*, which signifies "a farmer," and it is from *colere*, which means to cultivate, TO DWELL. Taking this, in connection with its definition as given in Webster's Dictionary, under the heading of natural history, the word colony means: "*A number of animals dwelling together*"—such as a colony of honey bees.—Ed.]

Bee Notes for October.

C. H. DIBBERN.

Of course, the honey season, such as it has been, is entirely over; and the proper thing to do now is to make all needed preparation for successful wintering.

All surplus arrangements should be removed early this month, and all the good honey prepared for market. I do not mean that all the good honey should be sold, but a good deal. Save out enough for the family to last until honey comes again, and let that be some of the very best—not such as you cannot sell. No one has a better right to the very nicest honey, or anything else, than the producer himself.

If there are a lot of partly-filled sections, they should be extracted, and the sections immediately given to the bees to clean up. Formerly this was quite a job, as the bees would often be found closely packed in the empty combs when it was desired to remove the cases again, but all this is easy enough now by the use of the bee-escape.

It is well to look over the hives and see that all have honey enough to Winter safely. To do this it is not necessary to look over every comb. This point can generally be easily determined by simply lifting the hives. If any are found short now, they should be given combs of sealed honey. If none are at hand, they may be obtained from hives that can spare them. Great care, however, must be used in opening many hives, as the bees quickly smell the honey, and robbing soon becomes furious if the work is long continued. Better do all this kind of work during this month just before dark, as robbing cannot then be continued long, and by morning the bees will have everything in order once more.

How can we best Winter our bees successfully? This question is now troubling many bee-keepers. Generally, I should say, stick to such methods as have proved satisfactory heretofore. This season the hives contain a greater proportion of honey-dew than ever before, and I fear that heavy losses will result should the Winter prove a severe one.

I had intended to extract a part of the combs from each hive and feed back sugar syrup. A trial of a few hives, however, convinced me that it was a job I would rather "let out," as I found it almost impossible to throw the black, gummy stuff out of the combs. Then, to buy sugar to feed in a season when bees have paid so poorly, is discouraging work; and it is a sticky business, anyway. Then, too, perhaps the bees will Winter on the honey-dew just as well (Mr. Heddon says they will), and, if so, what is the use of so much fussing? I am quite busy with other work, too, and have about decided to run the risk. Fortunately, the bees have gathered a fine lot of late honey, and this will greatly help them through the Winter.

Last Winter I found my bee-cellar under the honey-house too cold and damp, and the bees did not Winter as well as usual. I have now improved it by cementing the bottom and plastering the ceiling, and think it about perfect. I shall probably Winter a part of my bees on the summer stands, as it is not very good policy to have "all your eggs in one basket." The Mill Creek bees, of course, will all be put into the cave cellar, where they wintered so nicely last year.—*Western Plowman.*

Milan, Ills.

Capital Bee-Keepers' Convention.

A. J. ENGLAND.

The Capital Bee-Keepers' Association met in convention at Springfield, Ills., on Saturday, Oct. 10, 1891.

The meeting was called to order at 10 o'clock a.m., by President P. J. England.

In the absence of the Secretary, Arthur J. England, of Fancy Prairie, was elected Secretary *pro tem.*

The minutes of the last meeting and the Secretary's report were read, and approved as read.

The Treasurer's report was read and accepted.

After the preliminary business was disposed of, Mr. Geo. F. Robbins addressed the convention on the subject of honey-dew.

It was his opinion that the mild Winters and the dry weather of the past three or four years, are the causes of the great prevalence of the aphides pest. He has always noticed that a mild Winter is generally followed by a flow of the so-called honey-dew.

As to the disposing of it, Mr. Robbins said that on no considerations should any of it be put upon the market. He thought, however, that there was no harm in selling it at home, provided the customers are told just what it is; but he thought the best use to which it can be put, is to feed it to the bees in the Spring.

The subject of the source of honey-dew was thoroughly discussed by the members present. Several theories were advanced, but it was generally agreed that the flow of honey-dew, this year, was caused by the aphides.

Mr. Robbins reported his honey-dew to be of a light color. He thought that perhaps the difference in the quality of the honey-dew was to be accounted for by the age of the insect, and the kind of leaf from which it came.

In discussing the subject of selling the honey-dew, President England said he thought that if the honey-dew was to be sold at all, it would be much the best plan to sell it direct to the consumer, because in that way we have a better chance to explain its source and quality.

After some further discussion of the subject, a recess was taken until 1:30 p.m.

AFTERNOON SESSION.

The convention was called to order at 1:30 p.m., by President England.

Mr. Jas. A. Stone, chairman of the Committee on Fair Exhibits, reported that the requests of the committee had been cheerfully complied with, and that premiums amounting in the aggregate to more than $100, had been granted by the Sangamon Fair Association. Mr. Stone thought that larger premiums would be given next year.

The next business in order was the election of officers for the ensuing year, with the following result:

President, P. J. England, of Fancy Prairie.

Vice-Presidents, Jas. A. Stone, of Bradfordtown, and A. N. Draper, of Upper Alton.

Secretary, C. E. Yocom, of Sherman.

Treasurer, G. F. Robbins, of Mechanicsburg.

Mr. Robbins was chosen to deliver an address of welcome to the Illinois State Bee-Keepers' Association at its next annual meeting, in behalf of the Capital Bee-Keepers' Association.

A discussion arose as to the benefits to be derived from fair exhibits. Mr. Cooper thought they were of great advantage as advertising mediums.

Mr. Robbins considered that their greatest object was to educate the people on the subject of bee-culture.

The members reported that Winter stores were very scarce, and that much feeding would have to be done in order to carry the bees through the Winter.

After some further business the convention adjourned.

Immediately after adjournment Mr. Robbins stepped up to President England, and, in a few well-chosen words, presented him, on behalf of the members of the Capital Bee-Keepers' Association, with an elegantly bound copy of Langstroth Revised.

Mr. England responded briefly, thanking his fellow bee-keepers for their kindness, and said he hoped to merit their further good will.

Fancy Prairie, Ills.

Stray Straws on Wintering.

E. KRETCHMER.

From the heading you will readily infer that this is not an essay on wintering, but some disconnected ideas not usually found in the text-books.

That food is of the first importance, no one will deny. Some years ago a sorghum mill was located near me, which made molasses quite late in the season, and my bees stored large quantities of the juice, which I deemed unfit or unsafe for wintering. I therefore extracted the honey from all except 10 colonies. I then added to this extracted-honey and sorghum juice 1 ounce of salicylic acid and 1 ounce of bi-carbonate of soda for each 100 pounds, then refilled the combs, and returned them to the bees. The 10 colonies not so treated died with diarrhea, whilst all the others passed through the Winter in good condition.

UNITING BEES AND STORES.

With the Langstroth frame hives it is usual to place the brood-chamber of the weakest colony above. In such combs the honey is usually only in the upper part, the bees are slow to carry it below, at the same time they are compelled to warm two brood-chambers. With the alternating, or other horizontally sectional brood-chamber hives, we find in weak colonies their honey in the upper stories only; this we place between the two brood-chamber sections of the hive to which we desire to add the stores. After the bees have thoroughly occupied this section, we place it, bees and all, on top, and the honey is speedily carried below.

WINTER PASSAGES.

To make holes for winter passage through the combs has been recommended for years, but the tendency to induce robbing, and the time and labor it required has caused nearly all to abandon it, although much of the successful wintering, and the avoidance of Spring dwindling, is to some extent dependent on this central passage.

When we reflect that the queen, when beginning to lay in Winter, lays first a few eggs on one side of a comb, then on the other side; then increases the circle and lays a few eggs in the opposite comb, and thus, little by little, increases the spherical-shaped brood-nest, a central passage through the combs not only tends to an earlier beginning to lay, but also a more rapid extension of the brood-space. In the sectional brood-chamber hive we have a permanent central passage, earlier brood-rearing, and, consequently, an abundance of young bees in late Winter and early Spring.

SPACE UNDER THE COMBS.

I prefer a few inches of space under the brood-combs, into which the dead bees may drop entirely clear of the combs. This will prevent moulding, and consequently the live bees will remain in healthier condition.

In cellars and repositories which are free from mice, this may be accomplished by removing the bottom-board and placing the hives on pieces of timber 2 inches thick, or by making the second tier of hives break joints with the first tier; but when mice are likely to prove troublesome, or for outdoor wintering, a rim about 2 inches high, with an entrance near the upper edge, should be placed between the bottom-board and the brood-chamber.

CUSHIONS OVER BEES.

For outdoor wintering, every colony should have a cushion about 3 inches thick, placed over the top of the frames. These cushions I prefer to have filled with chaff, cut straw, dry sawdust, or corn-cob chaff. First, lay some sticks, about ½ inch thick, across the frames; over them a sheet of muslin or burlap, and the cushion over it. We frequently overlook the fact that bees produce a great deal of moisture, and that a warm, sunny day will evaporate a great amount from the cushions, if exposed to the sun's rays; therefore, on any warm, sunny day in Winter, remove the roofs from the hives, let the sun shine directly on the cushions, and after they are warmed on top, turn them over, and let the sun dry them. Bees kept dry will winter successfully, while bees under a wet, soggy cushion are likely to become diseased, other conditions being equal.

INDOOR OR OUTDOOR WINTERING.

In the Northern States the general verdict seems to be in favor of indoor wintering of bees, but by the use of the latest improved double-walled hives, Winter packing cases, and the proper preparation sufficiently early in Fall, we, in Iowa, can be excluded from that verdict, and winter successfully outside.

At various times I have made carefully-conducted experiments, which summed up somewhat as follows:

Outside wintering requires from 12 to 15 pounds more of honey per colony as Winter food, and unless that is added in the Fall some colonies may starve, and outside wintering would be condemned. Again, on discovering that it requires that additional amount of food, many would decide in favor of indoor wintering, arguing that the price of 15 pounds of honey would pay for taking bees into the cellar; but at the end of Winter we are only half through the season.

Bees properly prepared and wintered outside, have frequent and invigorating flights during warm days in Winter, breed earlier, Spring dwindle less, are strong at the approach of the honey harvest, and not only gather the additional 15 pounds consumed in Winter, but in one experiment 10 colonies wintered outside produced an average of 49 pounds more honey each, than 10 colonies, similarly prepared, that were wintered in a cellar.

WINTER PACKING CASES.

When, in 1885, we offered a Winter case for additional protection, many who favored cellar wintering deemed them an unnecessary expense, but the thousands now in use, prove them an investment that pays a good dividend.

But what is necessary for a Winter case? Is an air-space sufficient? Let us see! To satisfy myself, I constructed a box, with walls ⅜ inch thick, equal in size to an 8-frame Langstroth brood-chamber; this box was placed within another box of ⅜ inch pine boards, the outer box, being of such size as to have a 2-inch space between, this was filled with fine hay and sawdust. Another pair of boxes were made, but the space between was not packed; the temperature in the open air was 10° above zero; within the inner boxes I placed a pan containing water ¼ inch deep, and closed the boxes. Six hours later, the water in the unpacked box was frozen solid, while the water in the packed box contained no ice.

In a second trial, I placed an 8-frame Langstroth hive within one of the above-named outside boxes, and within the hive a pan containing water ¼ inch deep, and a similar amount of water into another hive without any outer-box; outside temperature 12° above zero. Five hours later, the water in the hive without an outer-box was half frozen, while no ice was visible in the hive surrounded with an outer-box.

This would indicate that an additional outer-case goes far to preserve an even temperature; one with the addition of some kind of packing in the space is better, which would indicate a *chaff hive*. These are called by Mr. Hutchinson "expensive and cumbersome;" but the latest improved 8-frame chaff hive costs but a trifle more than a good single-walled hive. Nor are they cumbersome, but, on the contrary, without the heavy corner post, and dovetailed corners, they are neat and convenient, weighing but a few pounds more than a single-walled hive.—*Read before the Iowa State Convention.*

Red Oak, Iowa.

Bumble-Bees—Black Bees.

ALLEN LATHAM.

On page 469 Mr. Downing speaks of bumble-bees and their habits. I do not want to question his powers of observation, yet he has either made a mistake, or else Kentucky bumble-bees are not the same as Massachusetts bumble-bees. Mr. Downing says: "She builds her nest, prepares 5 or 6 cups, lays eggs in them," etc. Several Summers ago I studied this useful insect, and went so far as to hive them, and even unite 2 colonies. My experience told me that the queen acts as follows: In early Spring she comes from her wintering place, and soon proceeds to *find* her home—she never "builds her nest." When her home is found, which is usually an old nest of the field-mouse, or quite often an old buffalo robe, she gathers a mass of pollen and bee-food, which she stores in the shape of a small round ball, the size of a pea.

Now, instead of "preparing cups," she makes a small hollow on one side of the ball, and deposits her six or seven eggs, afterwards covering them up. The larvæ from these eggs are reared together like a litter of pigs. When full grown, they spin cocoons separately. These cocoons are never afterward used for breeding, but are used as cells for honey and pollen.

I should say that the larvæ—each litter—are kept covered by a thin brown covering similar to the capping of the brood of the honey-bee. All the eggs of the queen bumble-bee are laid in batches of six or seven, or even more. The other interesting statements of Mr. Downing agree exactly with my experience.

BLACK BEES.

Mr. Ellingwood comes forward in behalf of the black bee, and in response Mr. Demaree extols the Italian. I have long thought that the black bee has been maligned—if not maligned, at least badly misunderstood. I think it is inferior, in many ways, to the Italian, but it does have noble points. Can we not breed the black bee to great usefulness?

It has been my experience to occasionally find a colony of black bees which were phenomenal. They bred up early in the Spring, entered the sections during fruit bloom, refused to swarm, and stored as much honey as any two other colonies. What does this mean? This was done by the *blackest* black bees that I ever possessed, and so it cannot be because they were a cross with some smarter (?) race.

I have always looked upon an individual black bee as just as capable as an individual Italian. The trouble is, to my mind, the black queens, as a rule, are not prolific. No one can deny that the black bee builds far better combs than the Italian bee, and caps its *full* sections with white cappings.

Cambridge, Mass.

Bee-Keeping as a Business.

J. H. ANDRE.

Bee-keeping as a business will advance more within the next five years than it has in the past fifteen years. The reason is, those who keep a few in box-hives find it a hard matter to dispose of the few large boxes of surplus honey they get at any price. When they run out of bees, that ends their business at bee-keeping.

Ten years ago I often found it difficult to sell nice honey for 10 cents per pound on account of farmers rushing in a few large boxes at a low price. At present there is but very little call for anything except small sections.

During the past two years I have found no difficult in contracting my crop for the season at 12 cents per section, measuring 4¼x4¼x1¾. A size containing a little more than two cubic inches less honey sells for 11 cents. It is all sold to grocerymen by the crate, contracted before I have a pound to deliver.

At first it was hard work to sell by the section, but after dealers try it they prefer to buy and sell that way. It saves trouble of weighing. Moreover, when purchasers are told so much per section, they know exactly what one costs without asking to have one weighed. I use no separators. When some are larger than others, the grocer adds a cent or two. If he forgets to drop a cent or two on the thinner ones, to correspond, it is none of my business. I only ask for what trade I need until the end of the season, and then settle This helps wonderfully in making bargains.—*National Stockman.*

Swarm and Colony, as Applied to Bees.

EUGENE A. WANDER.

MR. EDITOR:—I think both you and Mr. E. L. Holden are wrong in the argument regarding the definition of a colony and swarm. The word colony, in my estimation, means a plurality of families in a group, as, "An apiary is a colony of bees."* At the time of, or after leaving their native place, I think a group of men or women, taken separately, or conjointly with their mother, could not correctly be called a colony; also, as bees swarm from a hive, they cannot be called a colony, as at all times, under general circumstances, they do not contain a plurality of mothers, and, therefore, should be called a family of bees.

On the other hand, I think the word swarm is not correctly used otherwise than as a verb, because the word swarm really means an action of the bees, and not the bees themselves.†

I noticed upon page 215 of the BEE JOURNAL of Aug. 31, that a gentleman of Gale's Creek, Oreg., is comparing honey made by Italians and blacks. We all know that the blacks beat Italians in appearance of the honey. I have colonies of the best bees from several breeders, simply to experiment with, and I have not found any that in general have produced as fine appearing honey as the black bees. The Italians are simply "not in it" on appearance. I gave up experimenting with black bees last year, on account of their disagreeable conduct, and very little improvement by careful handling. Of course, I prefer the Italians to the blacks, but it is too bad to jump on the poor blacks unjustly.

I would answer I. F. Diamond, page 216, thus: "Some do; but most do not, when well bred and carefully handled. I have 3 colonies, the queens of which I destroyed only last week. These colonies are pure blooded Italians, and the queens were from some of our best breeders, but the moment the top of the hive was removed, they would dart out at me in a perfect fury, and if I was not protected, the result would shortly follow."

It is as you advise. Gentle manipulation is what we might almost say makes our bees love us, and I would never advise the use of smoke, except upon bees which attack the apiarist fiercely, and in the introduction of a queen.

Hartford, Conn.

[*Friend Wander is entirely wrong in defining the word colony. He says "an apiary is a colony of bees." But it certainly is not! The word apiary is thus defined by our best lexicographers. "A place where bees are kept; a stand or shed for bees; a bee-house." Hence, we use the term house-apiary. Instead of an apiary being a colony of bees, as Mr. Wander claims, it is a *place* where bees are kept—not the bees themselves! As this error is the foundation of his theory, all his arguments, based upon it, are erroneous!

†Mr. Wander is again in error about the word "swarm." When used as a name for bees it is a noun, and is thus defined, "A large number of small animals or insects." There, surely, it means "the bees themselves!"

It is not best to jump at conclusions—but to weigh the testimony and arguments in a just and deliberate manner.

We do not generally comment upon letters or articles unless called upon to do so, or when we deem it essential that some explanation be made, and quite often some reader will think such are necessary when omitted, and *vice versa.* We do not all see through the same spectacles.—ED.]

CONVENTION DIRECTORY.

Time and place of meeting.

1891.

Nov. 19, 20.—Northwestern, at Chicago, Ills.
W. Z. Hutchinson, Sec., Flint, Mich.

Dec. 31.—Michigan State, at Grand Rapids.
Geo. E. Hilton, Sec., Fremont, Mich.

Dec. 8, 11.—North American, at Albany, N. Y.
C. P. Dadant, Sec., Hamilton, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—P. H. Elwood....Starkville, N. Y
SECRETARY—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

Bee and Honey Gossip.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Honey-Dew from Aphidæ.

Let me state in the reliable old AMERICAN BEE JOURNAL, that I greatly object to the name sometimes given to honey-dew, with which my name has recently been connected. Honey-dew is the dictionary word. It is a good one. To exchange it for one repulsive and forbidding is certainly very unwise. No bee-keeper should ever use it, I think.

A. J. COOK.

Agricultural College, Mich.

Not the Authors of "Bug-Juice."

Our attention has been called to an article on page 453 of the BEE JOURNAL, regarding the origin of the term "bug-juice." We used it in that instance, as many had done previously. We have searched the back numbers of several bee-periodicals, and find the word "bug-juice" first used on page 776 of *Gleanings*, 1884. On page 266 of *Gleanings*, 1885, Mr. Hill uses the word, and also calls the so-called honey-dew "hop honey." "Bug-juice" occurs in four or five places in the above periodical for 1885. We cannot say who originated the term, and we now think the word should not be used.

JOHN NEBEL & SON.

High Hill, Mo.

North American Convention.

As previously stated, the meeting of the North American Bee-Keepers' Association will take place at Albany, N. Y., Dec. 8 to 11. Our President has been working hard, and has secured reduced railroad rates from Chicago and the Mississippi River, and from the South. The meeting promises to be the grandest in the history of the association, and we hope the West will send a good delegation. Besides personal members' attendance, we expect every local and State association to send one delegate, or more. This will be a good occasion for Western bee-men to become acquainted with the noted bee-keepers of the East, nearly all of whom will attend this meeting. Bee-keepers desiring to attend will please send their names to either the President, Mr. P. H. Elwood, of Starkville, N. Y., or to the undersigned, as we intend to publish a full list of those that are expected to be present.

C. P. DADANT, *Sec.*

Hamilton, Ills.

Purest Sugar.

Nearly everybody is of opinion that granulated sugar is the only pure sugar on the market. I beg to differ from them. It is the most poisonous grade of sugar, and should not be fed to the bees. My father was formerly engaged in candy-making, and he says that the only pure sugar we have is a good grade of A sugar—that it contains the least poison.

MATTIE ROBY.

Chanute, Kans.

Credit Where it is Due.

I have just received a marked copy of the AMERICAN BEE JOURNAL. The article copied from the *Rural Californian* was not written by me, but was clipped from some of our exchanges—which one I cannot now remember. I wish I could, for it occured to me when I read it that it was timely and truthful. The printer failed to credit the article to the proper source, and has destroyed the clippling, so that I cannot give the name of the author. I do not wish to have credit for an article that belongs to another, and therefore write to you so that the error may be corrected as far as possible. Had I been writing on that subject, I should doubtless have said about what the writer did say, and I endorse the ideas set forth in every respect. The Southern California Bee-Keepers' Association meets in this city on Oct. 21, at the same time as the Sixth District Agricultural Fair will be held, and we look for a good attendance, although the yield of honey for this year has not been very bountiful. C. N. WILSON.

Los Angeles, Calif.

◆

Four Bee-Trees.

This was my first season in bee-keeping, and despite the poor result, I am not discouraged, for I shall learn better how to manage the bees, and if I realize no great profit, working among and watching my little pets will be a source of pleasure to me. During the Summer I spent three afternoons in the woods, and found four bee-trees. I commenced with 3 colonies of common bees in the Spring, which increased to 9, but they did not give me 100 pounds of surplus, though the brood-nests are well supplied with honey and bees. White clover was abundant, but it yielded no nectar. Autumn flowers — heart's-ease, goldenrod, asters, etc.—were plentiful, also, but the drouth dried them up so that very little or no honey was stored from this source, which was the last chance for a honey crop. One mistake that I made, was in giving the bees too much surplus room, and the result is that not one section was fully finished.

D. A. CADWALLADER.

Prairie du Rocher, Ills.

◆

Much Below an Average.

The yield of fine honey in our State is, I think, much below an average crop this year. It is certainly so in the Shenandoah Valley. I do not suppose any State has a large crop.

Marlboro, Va. J. E. PITMAN.

◆

Why They Do Not Prosper.

I notice that several of the new bee-periodicals are already dead. The cause of this is, no doubt, that they spring into existence, expecting to supplant some old established periodical, and as that is a very difficult undertaking, the new one dies in the attempt. Only those succeed which mark out an independent course, and pursue it, and at the same time cultivate the good opinion of apiarists and the periodicals already established. The world is never too full for bright ideas, well expressed, and for original ideas. The new bee-papers die because *imitation* is stamped on them throughout. When bee-keepers see an imitation, they always go for the original. That fire which glows on one's own grate cannot be induced to burn in another by reflection.

Buffalo, N. Y. J. W. TEFFT.

Wavelets of News.

The Honey Crop of 1891.

The honey crop of the East will be short, at least 50 per cent. In California, the best authorities claim that only one-fourth of the amount produced in 1890 was produced there this year. The flora of California failed to yield the usual flow of nectar, and the honey was gathered principally in the alfalfa districts. In the East, heavy and continued rains in some States checked the flow, and retarded the work of the bees; while in other States, notably in Illinois, Indiana and Michigan, drouth dried up the nectar fountains, or burned up the wild flowers.—*Colorado Field and Farm.*

◆

Minorcan and Punic Bees.

An American journal publishes a notice of this variety of bees, calling them "the most marvelous bees in the world." So far as we are able to make out, this much-vaunted variety is none other than what we call the Minorcan bee. It probably comes to us from the north of Africa, hence its history.

LATER.—Since writing the above, we notice in the *British Bee Journal* that a Yankee apiculturist offers for sale queens of the Punic variety (are we to see here an allusion to the proverbial faithlessness of the Carthagenians?) at five pounds sterling each!

Another dealer of the same enterprising section of the Anglo-Saxon race, a certain Mr. Pratt—we must not omit his name, for surely he has a good chance of being immortalized—asks only the modest sum of 80 pesos—or 400 pesetas ($80). This is practically giving them away!—*Revista Apicola.*

◆

Apiarian Exhibit at Indianapolis.

The "busy little bee," all its products and everything pertaining to apiculture, were represented in the handsome exhibit of Walter S. Pouder, who is an authority on apiculture. The bee-keepers, who constantly consulted him, took much pleasure in his exhibit.—*Indianapolis News.*

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OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

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ALFRED H. NEWMAN,
BUSINESS MANAGER.

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We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

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The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The 7 above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
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Quinby's New Bee-Keeping	2 50	2 25
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Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
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American Poultry Journal	2 25	1 50
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Orange Judd Farmer	2 00	1 75
Farm, Field and Stockman	2 00	1 75
Prairie Farmer	2 00	1 75
Illustrated Home Journal	1 50	1 35
American Garden	2 50	2 00
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Nebraska Bee-Keeper	1 50	1 35

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

* * *

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

* * *

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

* * *

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00. For sale at this office.

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

The Bee-Keepers' Directory, by Henry Alley, Wenham, Mass. It contains his method for rearing queens in full colonies, while a fertile queen has possession of the combs. Price by mail, 50 cents.

Binders made especially for the BEE JOURNAL for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the BEE JOURNAL (with $1.00 to pay for the same), or 2 subscribers to the HOME JOURNAL may be sent instead of one for the BEE JOURNAL.

Not Trash, but interesting and instructive reading for the home and family. That is what the Rev. J. F. Geddes says about the ILLUSTRATED HOME JOURNAL. Here is his letter acknowledging the receipt of a prize:

COVENTRYVILLE, N. Y., Oct. 5, 1891.

DEAR SIR:—I am in receipt of a prize of $5, also your ILLUSTRATED HOME JOURNAL. Let me express my gratitude for the former, and at the same time say that I am highly pleased with the tone of your journal, its "get-up" and illustrations. Last year I subscribed for magazines and periodicals at double the cost of yours, which, in comparison, were vertible trash. I hope your circulation will rapidly increase, and that to such an extent as to drive (in a great measure) such rubbish from many homes.

J. F. GEDDES,
Congregational Pastor.

Pleasant Employment at Good Pay.—The publishers of SEED-TIME AND HARVEST, an old established monthly, determined to greatly increase their subscription lists, will employ a number of active agents for the ensuing six months at $50.00 PER MONTH or more if their services warrant it. To insure active work an additional cash prize of $100 will be awarded the agent who obtains the largest number of subscribers. "The early bird gets the worm." Send four silver dimes, or twenty 2-cent stamps with your application, stating your age and territory desired, naming some prominent business man as reference as to your capabilities, and we will give you a trial. The 40 cents pays your own subscription and you will receive full particulars. Address

SEED-TIME AND HARVEST,
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REMOVED.

We have leased more commodious quarters, and hereafter may be found at

199, 201, 203 EAST RANDOLPH ST.,
[THIRD FLOOR]

Where we shall be pleased to see any friends who may call upon us.

THOMAS G. NEWMAN & SON,
199, 201, 203 East Randolph St., CHICAGO, ILLS.

HONEY AND BEESWAX MARKET.

NEW YORK, Oct. 17.—Demand is limited, and supply sufficient. We quote: Comb—Fancy white, 1-lb., 14@15c; 2-lb., 12@13c; off grades, 1-lb., 12@13c; 2-lb., 11@12c; buckwheat, 1-lb., 10@11c; 2-lb., 9c. Extracted—Basswood, white clover and California, 6¾@7c; orange bloom, 7@7½c; Southern, 60@70c ⅌ gal., as to quality. Beeswax, steady, 25@27c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, Oct. 17.—The demand is fair, and supply light. We quote: White comb, 15@16c; dark, 10@12c. Extracted, white, 7@7½c; dark, 5@6c. Beeswax—None in market, and demand good, at 23@26c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Oct. 17.—Demand is only fair, with good supply. We quote: Choice comb, 14@16c. Extracted, 5@8c. Beeswax is in fair demand and good supply, at 23@25c for good to choice yellow.
C. F. MUTH & SON,
Cor. Freeman & Central Aves.

NEW YORK, Oct. 17.—Demand for honey is increasing, but is exceeded by supply. We quote: Fancy 1-lb. comb, 15@16c; 2-℔., 14c; fair, 1℔., 13@14c; 2-℔., 13c. Extracted—California, 7c; clover and basswood, 7@7½c. Beeswax—in fair demand, with adequate supply, at 25@27c.
CHAS. ISRAEL & BROS., 110 Hudson St.

CHICAGO, Oct. 17.—Demand is active for white comb-honey; supply limited. We quote: Fancy, 16c; other grades 14@15c. Extracted, 7@8c. Beeswax, quick sale, at 26@27c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Oct. 17.—Demand for honey good, with light supply. We quote: Comb—1-lb. white, 16c; dark, 12c; 2-lb. white, 15c; dark, 10c. Extracted—white, 7@7½c; dark, 5@6c. Beeswax, supply and demand light, at 25@27c.
HAMBLIN & BEARSS, 514 Walnut St.

DETROIT, Oct. 17.—The demand for comb-honey is fair and supply small. We quote: Comb, 12@13c; extracted, 7@8c. Beeswax in good supply, and light demand, at 25@26c.
M. H. HUNT, Bell Branch, Mich.

CHICAGO, Oct. 17.—The demand is slow for 1-℔. comb-honey, with good supply. We quote: Choice white comb, 14@16c. Extracted, 6@8c. Beeswax, in light supply, and demand slow, at 27c.
J. A. LAMON, 44-46 S. Water St.

ALBANY, N. Y., Oct. 16.—Demand improving; supply moderate. We quote: White comb, 12@17c. Extracted, 6@8c. Beeswax, scarce and in good demand at 26@28c.
H. R. WRIGHT, 326-328 Broadway.

NEW YORK, Oct. 16.—Demand good, with fair supply. We quote: No. 1 comb, 16c; No. 2, 13@14c. Extracted—California, 7@7¼c; basswood, 7¼@8c; Southern, 65@70c per gal. Beeswax, supply and demand fair, 26½@27c.
F. G. STROHMEYER & CO., 122 Water St.

SAN FRANCISCO, Oct. 15.—Demand good, supply small. We quote: Comb, 1-lb., 10@13c. Extracted, 5¾@6c. Beeswax, in light supply and good demand, at 24@25c.
SCHACHT, LEMCKE & STEINER,
16 Drumm Street.

CHICAGO, Oct. 17.—Demand is now good, supply is not heavy. We quote: Comb, best grades, 15@16c. Extracted, 6@8c. Beeswax, 26@27c.
R. A. BURNETT, 161 S. Water St.

BOSTON, Oct. 16.—Demand is good, supply ample. We quote: 1-℔. fancy white comb, 15@16c; extracted, 7@9c. Beeswax, none in market.
BLAKE & RIPLEY, 57 Chatham St.

MILWAUKEE, Oct. 17.—Demand not very brisk; supply good, and of better quality. We quote: Comb—choice, 1-lb., 15@16c; fair, 13@14c; dark, 10@12c. Extracted—white, in barrels or kegs, 7@7½c; dark, 6@6½c. Beeswax, 25@28c.
A. V. BISHOP, 142 W. Water St.

NEW YORK, Oct. 16.—Demand active, and supply increasing by large arrivals. We quote: Fancy 1-lb. comb, 14@17c, depending on quality; 2-℔. sections, 2c less. Extracted—White clover and basswood, 6@8c, and supply not equal to the demand. Beeswax—the supply is not equal to the demand, which is brisk, at 26@29c, as to quality.
F. I. SAGE & SON, 183 Reade St.

Convention Notices.

☞ The Michigan State Bee-Keepers' Association will meet in Grand Rapids, Mich., on Thursday, Dec. 31, 1891, and Friday, Jan. 1, 1892, **Geo. E. Hilton**, Sec., Fremont, Mich.

☞ The Northwestern Bee-Keepers' Society will hold its annual convention at the Commercial Hotel, corner of Lake and Dearborn Streets, in Chicago, Ills., on Thursday and Friday, Nov. 19 and 20, at 9 a.m. Arrangements have been made with the Hotel for back room, one bed, two persons, $1.75 per day, each ; front room, $2.00 per day for each person. This date occurs during the Exposition, when excursion rates on the railroads will be one fare for the round-trip.
W. Z. Hutchinson, Sec., Flint, Mich.

The Executive Committee have fixed the date of the next session of the North American Bee-Keepers' Association, Dec. 8 to 11, at Albany. There will be an informal meeting on the evening of Tuesday, Dec. 8, for getting acquainted, etc. The real work of the convention will commence Wednesday morning, and extend through two full days, ending Friday morning, giving distant delegates time to get home before Sunday. We want all to get there if possible on Tuesday. If they have a few hours of daylight it will give an opportunity to look around the city, view the capitol building, etc. Reduced rates have already been secured in all trunk-line territory, and the same is expected over other railroads. The programme is now under way, and other arrangements are nearly completed. If you have decided to take a vacation that will, we trust, be profitable, don't fail to attend this convention.
P. H. Elwood, Pres., Starkville, N. Y.
C. P. Dadant, Sec., Hamilton, Ills.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line**, for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

WANTED—HONEY—I wish to purchase 1,000 pounds of basswood or clover Extracted-Honey. Would be pleased to receive price delivered here. State kind of package.
17A2t P. P. CARTER, Scranton, Pa.

WANTED—TO SELL—A 40-acre fruit and honey farm; good market; no failure in six years' experience. For full particulars write to H. C. WILLIAMS, Marshall, Saline Co., Mo.
13A5t

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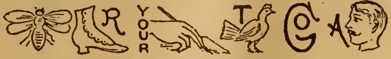
$300 in PRIZES

For a Correct Solution of this Rebus.

WE give 80 Prizes in Cash, as follows: 5 of $10.00 each; 12 of $5.00; 10 of $3.00; 28 of $2.00 and 25 of $1.00. Also 3 World Typewriters, at $15.00 each; and 17 Book Rests, to attach to any chair, window sill, table or bed, at $2.00 each, making 100 PRIZES in all. All have a chance to Guess!



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an elegant Monthly, devoted to the Home, Fashion, Music, Stories, and Decorative Art. Prizes sent for every Tenth Subscription on the day it is received.

Send 50 cents and your answer, before Dec. 1, 1891, when the names of the winners will be published.

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WINTER PROBLEM IN BEE-KEEPING! A WORK EXPLAINING IN A plain and practical way, the cause and prevention of Winter mortality in the Apiary. Price, 50 cents; Money Order or Postal Note. Address G. R. PIERCE, Blairstown, Benton Co., Iowa.

17Atf

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—BEING—

A talk about some of the Implements, Plans and Practices of a Bee-Keeper of 25 years' experience, who has for 8 years made the Production of Honey his Exclusive Business.

By Dr. C. C. MILLER.

—o—

Its descriptions commence with the necessary work in the spring, and run through the entire Year, detailing the methods of doing, as well as telling when to do, all that should be done in the apiary. It contains 114 pages, and is nicely bound in cloth.

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CHICAGO, ILL.

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RARELY is such a collection of valuable ideas embodied in a pamphlet like this. Its scope is as broad as its title, and the matter is presented in a concise, "boiled-down" manner, giving experience of many in few words. Among the subjects treated are these: Economy; Prosperity and Adversity; Character; Health; Remedies; Mistakes of Life; Is Life worth Living; Domestic and Household Affairs; Planting and Culture of Vegetables: Planting, culture, trimming and training Vines, Trees and Plants; Bees, Poultry, Live-Stock, Farm Topics, Pithy Paragraphs, etc. It is neatly bound in paper covers, and has a comprehensive index.

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I AM prepared to furnish Pure Extracted Honey in 60-pound tin cans. New cases and cans; graded goods. Carloads a specialty. Address **E. LOVETT, San Diego, Calif.**
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DR. C. C. MILLER,
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AS PRACTICALLY APPLIED;

Being a Method by which **the very best of Queen-Bees** are reared in perfect accord with Nature's Way; by

G. M. DOOLITTLE.

In this book the author details the results of his Experiments in Rearing Queen-Bees for the past four or five years, and is the first to present his discoveries to the World.

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12A26t

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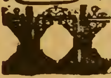

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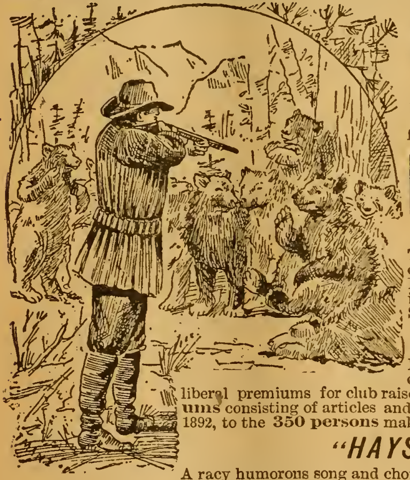

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FOR 10 CENTS in stamps, or otherwise, we will send the following good things, postpaid, to any address: **First**—the

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The Banner Farmers' Paper of the World,

Ten weeks on trail. This is a sprightly wide-awake, condensed, practical, **24-page weekly Farm and Family Journal.** Price **$1.00 a year,** or $1.10 with its **Free Seed Distribution** of 20 packets best seeds. **Second**—

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A racy humorous song and chorus with piano accompaniment, written for the FARM, FIELD AND STOCKMAN, illustrating the present uprising of farmers, particularly adapted to be sung in the lodge room, or at farmer's gatherings, picnics, etc. It is the best thing out. Price, twenty-five cents. **Fourth**—a copy of our

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THE AMERICAN BEE JOURNAL
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SOUTH AMERICA
AFRICA
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

Our Club Rates are: ***$1.90*** for two copies (to the same or different post-offices); and for THREE or more copies, 90 cents each.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVIII. Oct. 29, 1891. No. 18.

Editorial Buzzings.

The Nearest Dream recedes unrealized,
The heaven we chase,
Like the June bee
Before the school boy,
Invites the race,
Stoops to an easy clover,
Dips—evades—teases—deploys—
Then to the royal clouds
Lifts his light pinnace,
Heedless of the boy;
Staring, bewildered, at the mocking sky.
Homesick for steadfast honey—
Ah, the bee flies not
Which gives that rare variety.

Granulated Sugar made from beets is not considered safe Winter food for bees by the *British Bee Journal.* What is the opinion of those who have used such in America? We would like to hear from those who have experimented with it.

The North American Bee-Keepers' Convention will be held at Albany, N. Y., Dec. 8 to 11. Reduced rates on all the trunk line railroads are secured. Read the notice on page 566.

Prof. Cook expects to spend the Winter in California. Mr. A. I. Root having been advised by his physician to take a rest for 3 months, has arranged to go with Prof. Cook and his family. In a letter the Professor makes these announcements about the trip:

> DEAR MR. ROOT:—We arrive at Salt Lake Dec. 3; convention at Salt Lake Dec. 3 and 4; or if for only one day, Dec. 4. Leave Salt Lake Dec. 5; arrive at Reno, Nevada, Dec. 6; leave Reno Dec. 8; arrive at Colfax Dec. 8; stay two days; leave Colfax Dec. 11; arrive at Sacramento Dec. 11; call a convention for Sacramento Dec. 16 and 17. Do you like this? Can you not arrange for the meetings at Salt Lake, Utah, convention Dec. 3 and 4, and Sacramento Dec. 16 and 17? We go to Los Angeles Dec. 24. Why not arrange for a convention at Los Angeles about Jan. 6 and 7? It will be very pleasant to meet them, and they will be glad, I think.

California apiarists will be much pleased to meet these fellow laborers. Prof. Cook will interest them, either in the parlor, in the convention, or on the platform. He is an interesting speaker, and a charming gentleman.

As Mr. Root made the apiarists of California a visit so recently, they know him, and have taken his measure as a gentlemanly companion, a writer and speaker—but his very recent illness has, no doubt, weakened his energies, and they must treat him tenderly, for he is to take this trip as a *rest,* and a change of air for general recuperation.

The BEE JOURNAL wishes them all a safe journey and a pleasant time.

A Bird was found rolling about in front of a strong colony of bees by Mr. R. R. Godfrey, at Flaxton, England. He writes to the *British Bee Journal* that she breathed her last in great agony, some 2 or 3 minutes after being freed from the bees. There were some scores of them stinging her. Evidently, she had imprudently ventured to trespass upon the rights of the bees.

Bees Fly Rapidly, their wings vibrating at about 190 strokes in a second, when they mean business. This would give them a rate of about a mile per minute; but 10 miles an hour is about their speed in windy weather.

For speed, commend us to the wild fowls. Of these the canvas-back duck is "the racer," when it shows its power of flight. When taking it easy, this duck is said to go through the air at about 80 miles per hour; but when it goes in for a race, it puts 2 miles behind it every minute, and does it easily.

◆

Carpenter Bees and their wooded cells are thus described by Prof. A. J. Cook, in *Gleanings:*

> The handsome bee received from F. I. Tyler, of Bakersfield, Calif., is a species of *Xylocopa*, or carpenter bee. It is as yellow as the yellowest Italian, and is a beautiful addition to our cabinet. It is a new species to our collection, if not to science. I wish I could get eight or ten more like it.
>
> In its long abundant hair and yellow color it differs from most carpenter bees, and reminds us of the bumble-bees. Carpenter bees are usually black, blue or purple. The habits of these carpenter bees are well known. They bore into wood to form their cells, store these wooden cells with pollen, and lay their eggs in this, so that, as soon as the eggs hatch, the little carpenters can have bread (bee-bread) close at hand.
>
> We see our friend Aspinwall was not the first to construct wooden cells. These bees frequently tunnel into cornices and window-casings, and do no little mischief. I have frequently recommended the filling of the tunnels with an ointment made of either lard and kerosene oil, or sulphur and kerosene oil. This always drives them away at once. I have never known it to fail.
>
> The bee sent is a female. I should like very much to secure a male, if no more.

◆

Herman F. Moore, whose advertisement appears in this JOURNAL, was a member of the firm of Moore Bros., bee-keepers at Tiffin, Ohio, and is duly qualified to take care of any Chicago business, large or small, that may be intrusted to him.

At the Head.—We were not flattered by the following item from Dr. Miller in *Gleanings*, which says:

> Charles Dadant, in *Revue Internationale*, says that the United States stands at the head in apiculture among all nations, because of the study of bee-books. This country stands at the foot in the matter of bee-keepers' societies. We might learn something from other nations which leave us clear out of sight in numbers.

Dr. Miller states it very fairly. Here in America, apparently, apiarists belong to the rushing, dashing, pushing, business portion of the community, and they seem to have but little time to devote to conventions. They talk well, think rapidly, and are very practical in their plans—but they have no time to attend conventions!

In Europe, apiarists generally belong to the upper classes, and have plenty of time to devote to their chosen pursuit. They are more of a social and pleasure-loving disposition, and while they are not quite as demonstrative as Americans, their friendships are more enduring. We wish that their excellent examples in the matter of apiarian societies might provoke emulation here.

◆

La Grippe has crossed the Atlantic and struck New England. A correspondent from Connecticut writes:

> Never since 1868 has such suffering prevailed here. Nine-tenths of our people are laid up with epidemic influenza. Drug stores and local physicians are dealing out quinine in great quantities, and the ravages of *la grippe* of two years ago are pushed into the shade. Farmers, mechanics, professional men, and even idlers are sneezing and coughing, many of them being confined to their homes.

It behooves all to watch closely, and not to let a cold become seated. Watch its first stages, and arrest it there, if possible.

◆

Clubs of 5 New Subscriptions for $4.00 to any addresses. Ten for $7.50.

Stray Straws from *Gleanings* for Oct. 15, are as follows, from the pen of Dr. C. C. Miller, and they are very interesting, too:

Shake hands with me at Albany.

Sunday seems to be the favorite day for bee-conventions among the Germans.

Good honey should be a little more than a third heavier than water.

A remedy for stings, given in *Leipziger Bienenzeitung*, is to cut an onion in two and apply the cut surface to the part stung.

Bees fly 60 to 100 miles an hour under favorable circumstances, D. A. Jones thinks. M. Teynac, when using bees as carriers, found a loaded bee to make 3 miles in 15 or 20 minutes.

A melilot stalk, that I found growing in a clay bank on the roadside, measured 10 feet 4 inches in height. I can easily believe that a few years' growth of such plants in clay land would make it quite fertile.

Record-books have one advantage that is not to be despised. They are safe against the meddling of other people, animals, or winds. One year I had manilla tags on all my hives. Some person or thing, I never knew what, tore off nearly every one. If my only records had been on them, it would have left me in bad shape.

Robbing bees can be stopped, even when thoroughly under way, by wet straw or hay at the entrance. Pile it a foot thick all about the entrance, and then pour on water until everything is flooded. I have tried it a number of years, and this year saved a queenless colony thus, when robbers were at it wholesale, The robbers did not attack it afterward.

Bees as Dispatch Carriers.—A Frenchman, M. Teynac, has been experimenting, and seriously considers the advisability of substituting bees for carrier pigeons in carrying messages. A tiny piece of paper is pasted on the back of the bee, with a cipher number on it, and, when the bee returns to its hive, it can enter only through round perforations which will not let its paper through, so that the message is easily found.

Swarming was considered a desirable thing 50 years ago. Every year the desire for non-swarming bees increases. If all who are anxious for non-swarmers would breed only from those colonies which swarm least, it seems reasonable to suppose that some one of the number, in the course of a few years, would strike a strain that would be valuable in this respect. Because many have failed is no reason that some one else may not succeed. It is worth much trying.

The Punic queen that I succeeded in getting to lay seemed to be doing a good business, but suddenly disappeared, I do not know why, and the bees have raised a successor from her brood. The curious part of it is, that, of the progeny of the Punic queen (she was fertilized in my apiary), not one in 500 shows any black blood. A careless observer might readily take them for pure Italians. I still think it was a big thing to get a virgin queen from England, and get her to laying.

* * *

Metheglin.—Here is a recipe for making this delicious beverage, given in the *British Bee Journal* for last month:

Save all scraps from the extractor, and spare pieces. At the end of the season collect all broken combs which are clean and free from mould. Put them into a copper with sufficient water to cover them, boil until the combs are dissolved. Get a large shallow pan and strainer with a cloth in, bail out into the cloth, and wring the liquor well out from the cloth, and empty the wax back into the copper; repeat this until all is used from the copper. Let this stand all night; when cold take off the wax. Now put all the liquor back into the copper again, and boil for one hour. Add some ginger and a little nutmeg, according to the quantity of liquor made. Put in about half or three-quarters of a pint of "yeast;" stir up well; when cold put in small cask or stone bottles. Save sufficient liquor to fill up the cask, as it wastes in fermenting. When fermentation is over, bung up; it will then keep for years.

* * *

When Writing a letter be sure to sign it. Too often we get letters with the name of the post-office, but no County or State. One such came recently, and we looked into the Postal Guide and found there were places by that name in 13 States. That order for goods will have to wait until another letter comes to give the proper address. Be sure to stamp your letter, or it may go to the dead letter office.

Big Model of a Honey-Bee.—The model of a honey-bee, measuring 4½ feet from head to sting, and 6 feet across the wings, has been received from Paris by the Biological Department of the University of Pennsylvania. It is intended for the instruction of the students.

The insect is perfectly articulated, and the wings, head, thorax, and abdomen can be taken apart with the fingers. Moreover, the head may be opened so as to display the brain within. Every organ, artery, sinew, and tissue has been delicately reproduced, and the bee is to be dissected at lectures by Prof. Charles S. Dolley, for the information of the students. Emile Deyrolle is the maker of this singular model.

◆

Agricultural Experiments are now made in each State annually, and this is what an exchange remarks concerning some of them:

A part of the $15,000 annually appropriated by Congress for agricultural experiments in each of the States, is applied in Michigan to determine whether or not the light, sandy, pine barrens of the northern part of the State can be cultivated profitably. Thus far experiments do not justify the State authorities in advising farmers to occupy these large tracts for agricultural purposes.

As a result of the increased interest in agricultural colleges, Michigan has lost 14 college professors since May 1. At least 50 per cent. of the graduates of the State college at Lansing follow agriculture as a profession.

In support of the belief that the college has greatly benefited the farming interests of Michigan, it is asserted that its experiments in the line of insecticides alone have been of ten times greater benefit to the farmers of the State than the entire cost of the college.

◆

Frank Leslie's Weekly will certainly interest every Methodist in this country, for it gives on its front page, in most attractive style, character sketches of leading scenes at the great Ecumenical Methodist Council now being held at Washington.

Lightning killed three men while they were witnessing the manipulations of bees at Lacey Green, England. The *British Bee Journal* gave the following account of the accident:

The bee-tent of the British Bee-Keepers' Association was sent down to the show in question, Mr. Baldwin, the well known expert, being engaged to lecture and manipulate the bees therein. The tent had already been erected, and about 3 p.m., a skep of bees for driving purposes was brought on to the ground, and placed in a convenient spot beneath a cherry tree, a few yards away from the tent.

Mr. Baldwin went forward to release the bees prior to using them in the course of his lecture; he lighted his smoker, and was in the act of stooping down to untie the hive from its floor-board, when there was a flash, and in an instant 14 persons who had gathered beneath the tree were struck down. Three men were killed, and several others more or less seriously injured; among the latter was Mr. Baldwin, who probably escaped instant death through his stooping position at the moment; the three men killed having stood close by, watching his movements at the time of the occurrence.

The narrow escape our friend Baldwin had may be judged from the fact that he was rendered insensible for about an hour, and it was found that the electric fluid had struck him on the side of his head, which was discolored for some distance below the burn. A box of matches he had in his pocket at the time, was also ignited. He was got home next day, and though still weak, besides being a good deal prostrated, is getting on very well, and hopes soon to be quite right again.

◆

The Buckeye State comes imposingly to the front in the November number of Frank Leslie's *Popular Monthly*. The opening page is adorned with a new and admirable portrait of Senator John Sherman, who contributes a scholarly and thoughtful article upon "Ohio; Its History and Resources."

◆

If You Have any honey to sell, get some Honey Almanacs and scatter in your locality. They will sell it all in a very short time.

Extracted-Honey in pails has heretofore been classified for freight charges at double first-class; while "honey in the comb" was classed as "first-class." This was manifestly unjust, and Mr. Oliver Foster, of Mount Vernon, Iowa, sent a can of honey, with a statement of the facts in the case, to Mr. J. T. Ripley, the Manager of the Western Freight Classification Committee, and obtained a *ruling* that in future the Western railroads will receive "granulated honey in pails, boxed, at owner's risk (O. R.) as second class."

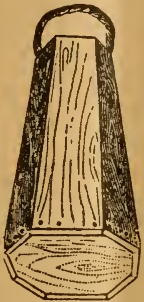


FIG. 1.

Of course, no liquid honey should ever be transported by freight, unless it is in barrels, kegs, or other tight packages, to prevent leakage.

This is an important matter, and the thanks of honey-producers are due to Mr. Foster for obtaining this ruling, which is now in force over "50 or more railroads throughout the West." We have had several interviews with Mr. Ripley, and have always found him to be courteous, and inclined to do the fair thing.

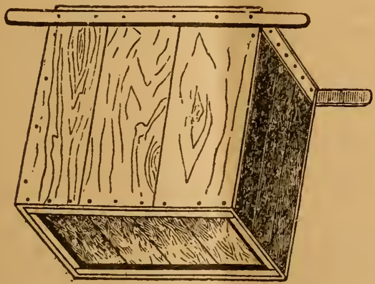


FIG. 2.

Mr. Ripley asked Mr. Foster to describe more fully his pails and the wooden box containing them: This was done as follows: Fig. 1 shows one box to contain a set of pails (one on the top of the others) with rope handle. The sides are ½ inch thick; the bottom and top are ⅞ of an inch thick.

Fig. 2 shows a box to contain four sets of pails, about 16 inches square; bottom and sides ¼ to ⅜ of an inch thick; handles and bottom strips ⅞x1½.

Mr. Root, in the last issue of *Gleanings*, asks this suggestion:

> Now, will not some one get up some plan whereby we can granulate liquid honey on short notice, even in warm weather? Consumers are being gradually educated to use this granulated honey, and very many prefer it in that form to any other, to spread on bread and butter.

Here is a chance for inventive-genius, and we hope that an easy and sure method of granulating honey will soon be discovered.

Honey-Dew.—A commission man writes that he is "being imposed upon by bee-keepers who forward honey-dew without stating the contents of the barrels." He adds: "We dislike to sell this to our trade, because of its ruinous results, and hope you will try to prevent such dishonorable actions." *Either this must cease, or the pursuit will be ruined!* This warning is timely, and should be heeded by all.

The Wintering Problem in Bee-Keeping; an Exposition of the Conditions Essential to Success in the Winter and Spring Management of the Apiary, by G. R. Pierce. This is the title of a new pamphlet of 77 pages, just issued by the author, who has had 25 years' experience in bee-keeping, and for the past 5 years has devoted all his time and energies to the pursuit. Price, 50 cents. For sale at this office.

African Bees.—A correspondent in the *British Bee Journal* asks the editor, Mr. Thos. W. Cowan, to write an article on African bees, and here is what he says about them :

> Among the African bees with which we are acquainted, are those from Algeria, Morocco and Tunis—all varieties of *Apis mellifica*. They are prolific black bees, said to be good workers, but which have not sustained their reputation when introduced into Europe. Queens of any of these varieties could be purchased for a few francs, and some years ago Algerian queens were offered for ten francs apiece by M. Feuillebois at Beni-Amran.
>
> The variety cultivated by the Kabyles is shiny black, and the workers much smaller than the average European bee ; the drones, however, are quite as large. The Kabyles inhabit the mountains lying towards the Desert of Sahara, where they live in small villages, and derive a considerable income from honey, and more particularly from wax. These bees are called *thizizoua thik' arriin*, and are cultivated in cylinders of cork-bark, basket-work, or earthenware.
>
> Some of the natives have as many as 500 of such hives of bees. They were first imported into France in 1874, and, by their behavior, showed that they came from a warm climate. They are great propolisers, which shows that they are not used to cold. Although quiet at times, if stimulated they become very savage, and not only attack persons, but even enter the houses in their vicinity. They have not proved satisfactory in Europe, and we know no one now who cultivates them.
>
> We know nothing about the so-called Punic bees, and can give no information as to their value. Possessing as we do one of the largest libraries of bee literature in the kingdom, it is strange that we have never found such a race alluded to. The word *Punic* means faithless, treacherous—neither of which should be considered good qualifications for bees. Punic bees are said to come from Africa, but the only varieties of African bees we know of are those alluded to above.

In reply to another correspondent, Mr. Cowan writes thus:

> Our correspondent says the word Punic does *not* necessarily mean treacherous, or faithless, but he does not say what else it does mean. We can supply the omission, as it may interest some of our readers.
>
> It is derived from the Latin *punicus*, meaning of, or pertaining to, the Carthagenians ; deceitful, treacherous, faithless. *Punica fides*, Punic faith, the faith of the Carthagenians; meaning perfidiousness, unfaithfulness, treachery. *Punica fides* was applied by the Romans to the faith of the Carthagenians because they *believed* in the perfidy of the latter. Are we to suppose a similar belief has given the name of Punic to bees ?
>
> We repeat that we know no such race, and the only African bees we know of are the varieties from Algeria, Tunis and Morocco, which we described.
>
> The Punic bees have been styled *Apis niger*, and although we are tolerably well aquainted with the bees of Africa, we know no such species, and have strong reasons to doubt the existence of such a species.
>
> Our correspondent has not adduced a single fact to prove that what he calls Punic bees are a distinct race or species, or that they may not be the common black bees, which we have mentioned as cultivated in the countries of Northern Africa, with which bees we are acquainted, and which have, as we stated, not sustained their reputation when imported into Europe.
>
> It is not enough to assert that there are such bees; we want corroborative evidence to prove it, and until such proof is forthcoming, we must decline to recognize such a species as *Apis niger*, alias Punic bees.

As the Time for the Columbian Exposition approaches, the interest in the great city of the World's Fair increases. The *Cosmopolitan* for November devotes 27 pages to a very full descriptive article by Capt. Charles King. The article is illustrated with 27 sketches from the pens of the two most famous artists in the line of architectural work in this country—Farry Fenn and A. F. Jacassy. It contains an immense amount of information regarding the city, and will serve as a guide to those who are looking forward to a visit to the Exposition.

Ship comb-honey now—before cold weather comes. Combs are very brittle in frosty air.

Queries and Replies.

Progeny of a Mismated Queen.

QUERY 790.—1. Will a mismated Italian queen produce pure drones? 2. If so, why will they produce pure drones, and hybrid workers.—J. G. C.

1. I doubt it. 2. I do not know.—C. H. DIBBERN.

I do not know; scientists must answer that.—MRS. L. HARRISON.

1. Practically, yes. 2. Read up on this point.—G. M. DOOLITTLE.

1. Our best authorities say so. 2. Consult Cheshire.—J. M. HAMBAUGH.

1. Yes. 2. Because no impregnation is necessary to produce drones.—EUGENE SECOR.

1. I believe not, but according to the Dzierzon theory they should.—G. L. TINKER.

1. If pure, I think she will. 2. Because the egg is impregnated to produce females, and not to produce males.—A. J. COOK.

1. Yes, if she is of pure descent herself. This is proven. 2. Study the question of parthenogenesis, in the books.—DADANT & SON.

1. Yes. 2. Procure the little pamphlet containing the Dzierzon Theory, and you will get a full answer to this question, and much information beside.—C. C. MILLER.

1. The scientists say she will. 2. Because all eggs impregnated as a result of the mating produce workers, and those not so impregnated produce drones.—R. L. TAYLOR.

1. Yes; pure enough for all practical purposes. 2. If you do not know, invest in some good bee-book, and study just a little. Space here does not admit of a full answer.—A. B. MASON.

1. Yes. 2. Because the eggs that produce drones derive their life wholly from the mother. They are the progeny in the male line, as well as the female, of their grandfather.—M. MAHIN.

1. She will, if she herself is pure. 2. Get some book treating on the natural history of the honey-bee, and read up on parthenogenesis, and on impregnation of the queen.—J. P. H. BROWN.

1. Yes. 2. Because the drone's birth is not dependent on, nor does it partake of the mating. So say our naturalists, and puffy queen-breeders have not as yet been able to refute that statement.—JAMES HEDDON.

1. In my opinion she will not. This matter has been thoroughly discussed during the last 15 years, with the result that some persons believe she will, and others that she will not, and there the matter stands. I am not ready to say I *am* right, though I *believe* I am. 2. They produce impure workers because the worker eggs are fructified from the drone sperm, while the drone eggs are not. The eggs of a virgin queen always produce drones. This matter is fully discussed in the "Dzierzon Theory" of parthenogenesis, which read.—J. E. POND.

How often this question has been asked! The theory is that the drone honey-bee is strictly the son of his mother. That the drone has no father at all. You may demonstrate to your own satisfaction, as I have done, that the queen honey-bee is capable of producing live, kicking drone progeny *without knowing a male.* But no one has as yet proven, by practical testimony, that such drones are capable of propagating the race. All my experiments in this line tend to show that drones of an unmated mother are impotent, and if this is ever demonstrated, it will unsettle the "purity" theory.—G. W. DEMAREE.

1. Yes, if the mismated Italian queen is the progeny of a purely fertilized mother. Drones are in no way dependent upon the mating of their mother. They are her offspring alone, and can be produced either before or after her fertilization; and even after her fertility ceases, when she can no longer produce worker eggs, by reason of age, etc., she can lay drone eggs, which will produce drones. Such drones must be capable of perpetuating the race, or else Nature has gone out of her regular course to preserve the race, without accomplishing her design. 2. While the mismated queen can produce pure drones—if she is of pure extraction—her worker progeny are the result of her mating with the drone, and unless the father is a pureblood, the workers will also be impure, *i. e.*, hybrids.—THE EDITOR.

◆

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms.

Topics of Interest.

Maine Bee and Honey Exhibit.

W. H. NORTON.

The Maine State Fair came off last month, and the exhibit of bees and honey and apiarian utensils was quite a feature of the fair, and proved to be very attractive. The following concerning it appeared in the Lewiston *Journal*, and will no doubt be interesting to the readers of the AMERICAN BEE JOURNAL, and show what we are doing "away down East," especially as they do not hear from us very often.

Here is the article under the heading of "Pyramids of Honey," and "The Buzz of the Bees at the Fair:"

"Oh, look here Jim, just see the bees a buzzin' there! What do you suppose they are up to?"

"Sh—Sal!"—he said in *sotto voce*—"them bees are makin' honey there like blazes. Good year for bees they say, and that's the way they do it."

Just so, good year for bees—that part of it so—and the bee men are happy.

Passing up onto the second floor of the exhibition building Wednesday afternoon, three-fifths of those met came along smiling, and smacking their lips like kittens cleaning out the cream pitcher.

Whence comes this happy crowd, was asked. "Oh, we have been over to the honey-man's corner. Just too sweet for anything, aren't they?"

"Sure! Sweet? Well, I guess so."

Let us go over there. "Who's that stands smiling by the corner table talking with that Brunswick divine?" "That! Oh, that's Maine's honey king, E. H. Greeley, of Clinton."

"That so! How much?"

See his great pyramid of honey, piled clear up out of reach. Hundreds of pounds of honey in sections and packages of extracted, clear as amber, and just that tempting tint denoting the sweetest nectar.

Mr. Greeley is happy this year, and well he may be. He over-tops all the honey yields of Maine. Five thousand pounds of the nicest clover nectar. See it piled up beside the wall. And here are samples of the bees which have done this sweet work this Summer.

The first in importance are the beautiful golden Italians; next is an observatory hive of Holy-Land bees—totally depraved, we believe, though; next comes the Carniolan bees, a kind of boomerang-sort, that haven't much to commend them, if we are any judge.

Here also are queens in shipping cages; beeswax all tastefully arranged, making a neat exhibit.

Next is Mr. J. Pike's exhibit of bees and honey from his farm near Livermore Falls. Mr. Pike has a smaller exhibit, but a good lot of beautiful comb-honey, and honey in bottles.

Here are also samples of honey from different flowers, eight or ten kinds, of as many colors and flavors. Mr. Pike has an observatory hive with bees showing queen-cells. Mr. Pike has a good knowledge of bees, and studies their ways to good purpose.

One of the ingenious bee-men, an inventor, a careful investigator as well as scientific and practical bee-keeper, is Mr. W. H. Norton, of Skowhegan. Mr. Norton has a whole museum of bee-fixings, and will give you a lecture on the application of bee-science any hour in the day, and every time different. His is an inexhaustible fount of bee-knowledge and application of principles, and will broach more practical ideas in ten minutes than the ordinary mortal can digest in ten years.

Norton is working out some problems that will be of great benefit to Maine bee-keepers. In fact, he has already done that, and surprises are yet to come. See his beautiful foundation. The thing was never accomplished before of making 16½ square feet of comb-foundation to the pound. Norton does it, and shows you the machine he does it on, but the sly fellow wisely keeps some of his manipulations of the fine wax to himself.

Mr. Norton runs a good sized apiary, but he does it for experiment largely. If there is a new bee spoken of, Norton gets it. He shows some hybrid Punic bees, which, probably, not one in a thousand who visit the fair ever heard of before.

The largest display of utensils and implements used in handling bees are found with Mr. Norton's exhibit. His new extractor is a model of simplicity and utility. His smoker is an improvement on all before it. His new hive is a masterpiece of simplicity and compactness, good workmanship and practical usefulness. He "takes the cake" on the reversing principle. His sections are of snowy whiteness, and smooth as sand-paper can make them. And so we might go on commenting for an hour and not tell all about Norton's wonderful exhibit of apiarian fixings.

Passing on to the opposite table, we find Mr. C. W. Costellow, of Waterboro, with a large exhibit of this, that and the other, pertaining to the bee business.

Mr. Costellow has a new double-walled hive, and he has made a good thing. One of its merits is its cheapness, combined with the feature of protection for outdoor wintering. His hive is made of ⅜ inch stuff, hence, in its double structure is as light as a single-walled hive. Mr. Costellow is a bee-keeper of experience, and has studied the application of practical principles to bee-keeping with good results. He keeps from 20 to 25 colonies of bees, and is well versed in scientific and practical apiculture.

An interesting thing in Mr. Costellow's collection is the alcoholic specimen of bee-larvæ in all stages of transformation, from the egg to the mature larvæ. He has specimens of foundation from bleached wax, sections and section-cases; the latter in divided form, containing six sections each. With the exhibit are samples of all the bee-periodicals published in this country—something quite unique.

Dennett Cotton, of Norway, makes a large exhibit of bee appliances. He has also Carniolan bees, and what he calls the golden-banded Italians. He has dovetailed pine section-cases, one-piece sections, and flat-bottomed foundation.

Perforated Zinc Queen-Excluding Boards.

F. H. CYRENIUS.

For excluding the queen from the sections it is of no account to me, which was, if I am correct, its first cause of invention.

Having already described its use for finding or separating the queen from the colony, by shaking the bees upon a sheet between two hives, or arranged in a hollow box for the purpose of allowing the workers to pass through, leaving the queen behind, is a satisfactory way of finding shy queens.

To arrange for non-swarming extracting: just before swarming, divide the bees and brood, just as you would to make a swarm—placing one-half the bees and brood in a new chamber, filling vacancies in both hives with empty comb or foundation, and place one above the other, with a sheet of zinc between. The queen must remain in the lower hive. This operation will prevent all swarming if done at the proper time, until the lower apartment is again filled with brood.

We have taken nothing away from them, they have room for eggs below and honey above in the empty combs or foundation, and as the brood hatches in the upper chamber, they will have more room for honey. At the time of extracting again, take about one-half of the brood from the brood-nest, place it in the chamber, and change from the chamber of the brood-nest the empty combs.

This principle of drawing part of the brood from the brood-nest, and replacing it with empty comb or foundation at proper intervals, with me entirely prevents swarming, and by placing the removed brood in the upper chamber, keeps the colony very strong, and in good working order. In a heavy flow of honey, add an extra chamber, if necessary.

I heartily recommend Mr. Doolittle's plan of rearing queens in the upper chamber, and, to this end, place the chamber with the entrance opposite to the lower entrance, and nearly all the queens hatched will be fertilized, and begin laying in the brood-chamber, at which time it may be placed on a new stand, and you have a fine "swarm" with a young laying queen. Repeat the operation again if more increase is desired.

Cannot this principle be carried out for comb-honey, viz.: Draw part of the brood from the brood-nest, fill out with comb or foundation as before, put on the sections, place the brood on the top of the sections, or at the side of the parent colony, and occasionally shake the bees in the old hive, or allow them to enter, as they hatch and are old enough, through a bee-escape, carrying out the same principle of removing the brood from the brood-nest to prevent swarming, and returning the hatching bees to keep up the full strength of the colony.

The above methods are for out-apiaries. I can only speak for the extractor-method with experience, which is perfectly satisfactory to me.

My next progresssive step, with the aid of zinc, is to assist in queen rearing.

How annoying it is to find one queen, just hatched, out with a swarm, or all other cells torn down.

I made a number of zinc cages, the object of which was to allow the bees to pass out and in, to give the enclosed cell all necessary care, and to have caged all the queens hatched.

A cell of any age may be placed in the cage, upon wire arranged for the purpose, and by dividing a Langstroth frame into three sections, by two strips horizontally nailed into the frame, we can place 6 cages upon each section, making 18 in each frame. So you see a great many queens can be reared in one hive at a time, and you may get them as desired.

Last season was my first experience with them, and the result was very satisfactory. Any cells I wished to preserve were placed in a cage, and as they were hatched I could select or reject them, which is an advantage I did not appreciate until I used the cage.

My next plan was to make a section with movable tin slides and zinc bottom, with a fly-hole out of section case, and by the use of one "box" we can rear queens and have them fertilized, and begin to lay, caged in a single "honey-box."

Next came to my mind the idea of a zinc division-board, thinking that it would be more effective for many purposes than solid wood. For fertilizing queens we have only to insert the zinc board between the outside comb, with cell or virgin queen with entrance provided, and we soon have a laying queen. Thus we can, with a few hives, arranged in this way, secure the fertilization of a large number of queens in a short space of time, without interfering with the full hive any more than to rear a queen in an upper chamber.

Two or more queens may be kept in one hive by the use of zinc division-boards. The boards may be made of very thin lumber with narrow strips of zinc, to save expense.—*Read at the New York Convention,*

Bee-Keepers' Convention in Germany.

STEPHEN ROESE.

September 6, 7 and 8 were the days appointed for the gathering of the bee-keepers of the German Central Verein, in Eger, a noted city in Germany.

Bee-keepers in Germany are a class of people greatly honored, and the city authorities usually furnish halls for their meetings free, and the Burgomaster, in the opening address, welcomes the guests on behalf of the city.

Over 2,000 people were in attendance, including about 60 exhibitors of bees of all races, honey of all kinds, wax, books, and apiarian supplies of all descriptions, all of which, amounting to 3,000 lots, were sold before the awarding of the prizes began.

The city of Eger gave three prizes—25, 15 and 10 silver gulde (a silver gulde is about 66 cents in American money); Obman Herr Krader, a silver coffee service; and the German Central Verein, 3, 2 and 1 ducates; the German Landwirthschaftli die Central Verband, 60 gulde. In all, 30 prizes were given, the smallest being 1 ducate.

On Saturday, the day before the opening of the Imker gathering, the majority of the houses were decorated with flags—black and yellow, the Austrian colors, and black, red and yellow, the German National colors. In the evening, the bee-keepers met in the Rathskeller, to nominate committees.

On Sunday, at 10 a.m., the exhibition was opened by the Burgomaster, after which the Eger Saengerbund gave a charming choral. Burgomaster Staake addressed the meeting, and welcomed the bee-keepers on behalf of the city.

German bee-keepers are a very enthusiastic people, and whatever they undertake to do is never done by halves. Their regulations are perfect, and young and old engage in the work, determined to succeed. Weekly meetings are held with due regularity, and they deserve praise for their perfect organizations, in sections, under an Obman, Vereine, and Central Vereine.

The annual honey production is a marvel, when the density of the population is considered, and the consequent limited bee-pasturage, and if America is not on the elert, Germany will take the lead in this respect.

Maiden Rock, Wis.

Preparing Bees for Winter.

B. TAYLOR.

The wintering problem is the most difficult and important one connected with bee-keeping. There is doubtless more loss from failure to winter successfully than from all other causes combined; and it is conceded by the most successful apiarists that it is indispensable to have bees properly prepared for the long season of rest; and to have them prepared properly we must begin early, before the weather becomes too cold, and the bees have settled into a semi-dormant state; for neither smoke nor other means will enable us to handle them properly when in such state. It is also agreed that while clamps and outdoor wintering is sometimes quite successful, still cellar wintering is far safer as well as cheaper.

Those who have large numbers of colonies should have a special apartment for their bees. It may be a room of suitable size partitioned off from their vegetable cellar, or one properly constructed outside, for their especial use. It may be made in any manner most convenient, but so constructed that it would winter vegetables without freezing. The small bee-keeper can set his few colonies in the house cellar, in some convenient corner, and protect them from too much light by hanging up some old carpets, bed quilts, or similar articles. But unless the hives are prepared in the proper way no kind of repository will winter bees without loss.

It must also be understood that sufficient food is of prime importance. Where hives contain less than 20 pounds of sealed stores they should be fed by giving them sealed combs of honey, if we have such; if not, a syrup made by mixing 10 pounds of water with 20 pounds of granulated sugar, and heating it to the boiling point, makes a first-class Winter food. At the present price of sugar, this syrup will cost not more than 4 cents per pound, and 12 pounds, costing 50 cents, will, when added to the small store already in the hive, winter a strong colony, when placed in a cellar, and kept at a temperature of from 40° to 45°. Surely, no humane man will let these industrious and profitable insects perish for want of this small outlay.

There are many ways of giving this food, the cheapest being by tipping the hive an inch or so back, and pouring it in at the entrance, a quart or so at a time. But the bottom of the hive must be sealed tight, or the syrup will leak out and cause robbing, which is one of the great dangers in feeding. But whatever method is employed in giving the food, it should always be given just at night, so that the bees may have it all taken up by morning. A far better way for Fall feeding is by a suitable feeder to set on top of the hive, and give the food all at one time, which saves much work, and avoids robbing. With five or six such feeders many colonies may be fed in a short time.

Shallow rims, of 2 or 3 inches in depth, and the size of the hive, placed between the hive and the bottom-board, we regard as very necessary in cellar wintering. They should have a full ⅜-inch entrance left in them next to the bottom-board, and the entire length of the front of the hive. Or ⅜-inch blocks may be placed under the corners. A larger space may let in mice. Some of the most successful bee-keepers remove the bottom-board from their hives when placed in the cellar. The first tier of hives is set upon scantlings 12 inches from the cellar bottom; the hives ¾ of their length apart, and the next tier on top of these, and directly over the openings in the first row; the third tier on top of the second in the same way. This may be continued to any convenient height. In wintering on the bottom-boards, common straw-board building paper makes a first-class cover for hives. Cut the paper one inch larger than the top of the hive, place on top and fasten down to edge of hive by tacking on small strips of wood. No upper ventilation should be given.

In outdoor wintering the hives are left on the summer stands, separately or in long rows. An outer case made of cheap boards is placed around them, 6 or 8 inches from the hives, and this space filled with chaff or sawdust, with an opening properly made for the bees to fly out on warm days. The packing should be 8 inches thick under and over the hives, and covered with a rain-proof roof. We would never advise wintering outdoors, in this climate, if a suitable cellar is within reach.—*Farm, Stock and Home.*

Thick Top-Bars and Honey-Boards.

FRANK COVERDALE.

Much has been written during the past two years about thick top-bars to brood-frames, the object being to do away with wood-zinc honey-boards. I would say to those who have top-bars ⅞ inch thick, and zinc honey-boards: Stick to them, for you will find nothing better.

While the thick top-bars are good, and will answer the purpose for which they were designed, or nearly so, they are not queen-excluding, and therefore, we are in need of a queen-excluder, and when it is used on top of these thick top-bars, the sections are some distance away from the combs: First, ⅞ inch depth of top-bar, ⅜ inch space, slats on honey-board ¼ inch, space above honey-board ⅜ inch, slats in bottom of section-case ½ inch; all of the above space being devoid of comb. This being the case, on cool nights the bees would have to go down into the brood-chamber. In early Spring, and during the Fall harvest, as a rule, there will be little danger of too much heat in the section-cases.

If I cannot have a queen-excluder attached, in some form, to thick and wide top-bars, I do not want them. If top-bars are ⅞ wide, and spaced 8 to the foot, with ⅜ inch space between them and the wood-zinc board, burr-combs will be built in sufficient quantity to afford steps for the bees, clear up to the perforations, so that the zinc excluder is virtually the top of the combs in the brood-chamber.

If ⅜ inch space is left on top of the honey-board, not a particle of burr-combs will be built there—in fact, everything above the board will be nice and clean; you will be sure that you have not molested the queen; you will not put on your bee-escape, and at times find that your queen was exploring the upstairs.

Again, when bees are but slightly disturbed the queen starts, and may get into the sections, and you might take her into the honey-house, or she might deposit a few eggs in drone-comb built there, for the more you deprive the bees of drone-comb below, the stronger the probability becomes that the queen will enter the sections, for she will find plenty of drone-comb there, if full sheets of foundation are not used.

Of course, the wood-zinc honey-board will be well fastened down, and need not be removed very often. When loose bottom-boards are used, much of the examining can be done from below, by raising one end of the hive body and using a little smoke, and you can see whether there are queen-cells started or not, or if there is any capped brood.

When bees are to be handled most, in Spring, your boards are in the honey-house. Even if the top-bars do sag, all will be nice on top of the honey-board, and should the slats sag in the honey-board, no burr-combs whatever will be built on top.

Then again, ⅜ inch is just the right space over a wood-zinc honey-board, and ¼ inch about right over the wide top-bars, for, of course, we do not expect these heavy top-bars to sag, and the bottom slats in many of our section-cases will sag, and in the center, over these heavy top-bars there will be only room enough to make a safe retreat for a bee moth, but the slats are now being made much thicker.

These light boards occupy but little space in the store room, if piled up carefully, and when in use on the hive you can put on sections of brood-comb, either without brood in to have them filled with honey for extracting, or containing brood, and have queen-cells built in the upper story, *a la* Doolittle.

Hive a prime swarm in an 8-frame hive, and by using the honey-board the section-case may be placed on the hive at once, whether combs have been built in it or not, and we do not have to wait three days, until the queen has begun laying below. I consider that this one feature makes it profitable for me to use the zinc honey-board.

Welton, Iowa.

Large Apiaries in California.

J. F. M'INTYRE.

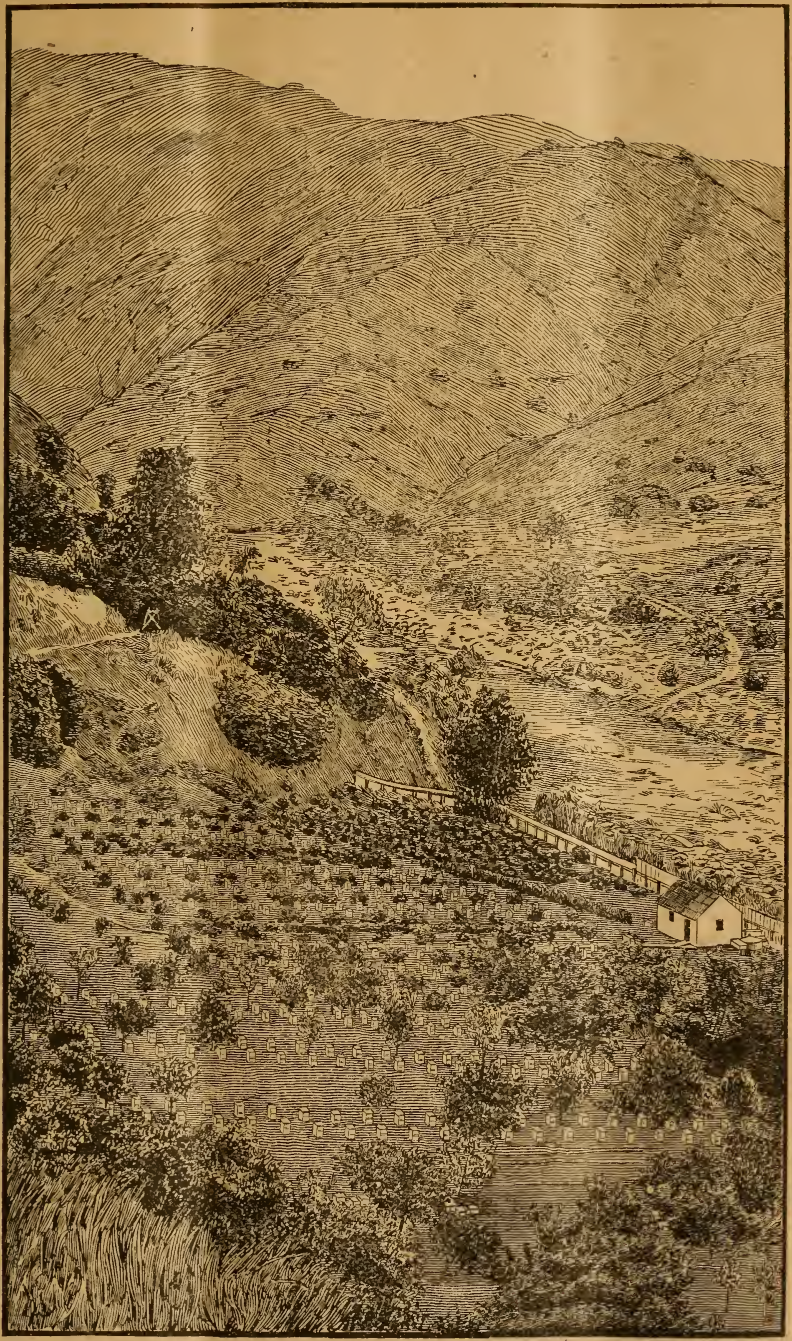
One of the greatest drawbacks in trying to keep about 500 colonies in one apiary is that the bees are bound to get more or less confused, and to enter the wrong hive. I think this is the chief reason why young queens are so often balled at mating time; and in laying off an apiary, I always try to avoid this as much as possible, and still have the apiary convenient to work.

When Mr. Wilkin had 500 colonies on the space occupied by the six double rows in the middle, directly above the honey-house, this confusion was sometimes quite serious. When a swarm came out in the middle of the day, the lost bees would go with the swarm until it was large enough to fill four hives, when they would ball and kill the queen, and in a few days scatter with other swarms, and thus keep the owner in trouble all the time.

That part of the apiary in the orchard pleases me better than any other arrangement of hives I ever tried. It is much better than the grapevines. The trees were originally 18 feet apart each way; but I cut out every other row running up and down the hill, to give the bees a better chance to fly in and out. This gives 36 feet to each double row.

The two hives take 4 feet, and there is a 5-foot space between the backs, to run up and down with the honey-carts, and 27 feet between the fronts, hives 6 feet from center to center in the rows. The bees keep their own hives, and do not work out to the ends of the rows in this orchard part. Queens are not balled, and it is a treat to get into the shade occasionally when taking out honey.

The high board fence is not designed to keep out thieves, but to protect teams and people from the bees. The water over the honey-house, shown in the engraving on the next page, is the Sespe



APIARY OF J. F. McINTYRE, FILLMORE, CALIF., LOOKING EASTWARD.

Creek, from which the apiary took its name. It is all pure spring water, from the mountains in the background.

The rain falling on the mountains in the Winter passes down through them and runs out at the base all through the long dry Summer, and thus the mountains act as reservoirs on a gigantic scale.—*Gleanings.*

Fillmore, Calif.

[Friend McIntyre has sent us two photographs of his apiaries in the mountains, and we have had engravings made of them, and will present them to our readers. The first one is given on the preceding page, and shows the apiary looking eastward. Another will be given next week, showing the view from the west.—Ed.]

The Golden Carniolan Bees.

F. GREINER.

Since Prof. Cook recommended Carniolan bees, a few years ago, this race has gained favor with the American honey-producers. Our observations and experience with these bees seems to corroborate the opinion held by some that the Carniolan bees are only a strain or variety of the common black or German bee.

Mr. Henry Alley appears now to have discovered that the Carniolan bees are the original yellow bees. If this be true, we want it to be known as quickly as possible, as friend J. A. Green observes in the American Bee Journal.

Mr. Alley's discovery, it seems to me, is a pretty strong dose for us American bee-keepers to swallow. For my part, I cannot comprehend how it can be possible, within four generations, to breed black bees into yellow ones. Black bees have for years reproduced themselves, even in this country.

Comparatively, it is only a few years since the Carniolan bees made their appearance in this country. Our literature and our experience with them cannot be so very extensive; for this reason I ask bee-keepers to listen to a practical bee-keeper, who lives near the home of the Carniolan bees. He is a scientist, a prominent writer, and an authority on fundamental questions pertaining to our pursuit. It is Mr. W. Vogel, editor of the *Nordlinger Bienen Zeitung*, Germany. The following is an extract from his letter, dated Sept. 18, 1891:

"There can be no doubt that Mr. Alley's golden Carniolan bees were produced by his Carniolan queens mating with drones from the Italian or Cyprian race. The assertion that the Carniolan bees are the original yellow bees has not the shadow of a foundation.

"I have watched the Carniolan bees in their native land, and *there they are not golden!* I have also kept the Carniolan bees for years.

"It is true that some Carniolan queens produce worker-bees (one in 50 perhaps) that show a reddish spot on their first band; but this is not a peculiarity of the Carniolan bees only. The same occurs with our black bees, and did occur before any Italian blood was introduced here. I regard the Carniolan bee as being a strain of the common black or German bee."

The original of Vogel's letter is in my hands for inspection, and can be published if desired by permission of the author.

Naples, N. Y.

Some Facts About Punic Bees.

E. L. PRATT.

On page 424 it is said that "Punic bees are getting some hard blows from good apiarists." Well, this was expected.

As soon as I made it known that I had imported these bees into America, the blows started from all quarters, just as they always have when anything new is introduced, mostly from persons who have never seen a Punic bee.

What effect will this have on the real value of the bee in question? Will it in the least injure their valuable traits?

I will admit that it may influence a few would-be-customers for one or more queens, and that is all. That the Punic bees are entirely different from any bees ever brought to this country is unquestionable, and for that reason, taken with the valuable traits they possess, Punic queens will be in demand another season.

Mr. W. Johnson wrote to a brother who lives near Sheffield, England, and was told that Punic bees were "nothing but small black bees; have no wonderful traits," and he wonders why "Americans are so gullible."

Perhaps I can explain this, as I was the so-called "gulled (?) American." I was so "gullible" because the Punic bees were far ahead of any bees ever brought to this country, in many of the points that are requisite to successful bee-keeping, for pleasure or profit. The Punic colonies in my yard to-day are in better condition than all the others. I did not feed them, yet they are heavy.

It has been said that Punic bees were not advertised in the English bee-periodicals, but this is a mistake. They were advertised last year, and would have been this year if the *British Bee Journal* had not refused to insert the advertisement.

The Punic stock in Mr. W. B. Carr's apiary, in the Spring of 1890, was the "best and strongest" he had. (See *Record*, an English bee-periodical, for June, 1890.)

In answer to Mr. Lowmaster, in a late number of the *British Bee Journal*, they say that they know nothing about the Punic bees, *Apis niger*. In that same periodical for June 5, 1890, page 271, is a mention of Punic bees, and where they came from. (See also *British Bee Journal* for May 29, 1890.) Why? Simply because Messrs. Cowan and Carr did not know that Punic bees were so hard to obtain from their native clime.

The English *Journal of Horticulture* has several times contained long accounts of the Punic bees. These bees are standing well in the estimation of all who have tried them, thus far, in America, and it does seem as if we at last had a "dollar-and-cent" bee. They are the greatest workers I ever saw. A "fair trial" should be given them.

Beverly, Mass.

Wintering Bees on Summer Stands.

C. W. COSTELLOW.

When bees are wintered on summer stands, if the entrances become clogged, and they try to fly and find themselves confined, they are apt to worry themselves into a diseased condition. To keep the entrances open and clear of dead bees and snow, I put a frame or rim, the same size as the hive and 4 inches deep, between the brood-chamber and the bottom-board. If there is no entrance in the hive-body, one ⅜x3 inches should be cut in the top edge of the rim. This arrangement is simple, works to perfection, and is adapted to all hives having a movable bottom.—*Exchange.*

Do Not Forget the meeting of the Northwestern Convention, on Nov. 19.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Nov. 19, 20.—Northwestern, at Chicago, Ills.
W. Z. Hutchinson, Sec., Flint, Mich.

Dec. 31.—Michigan State, at Grand Rapids.
Geo. E. Hilton, Sec., Fremont, Mich.

Dec. 8, 11.—North American, at Albany, N. Y.
C. P. Dadant, Sec., Hamilton, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—P. H. Elwood....Starkville, N. Y
SECRETARY—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

Bee and Honey Gossip.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Almost a Failure.

The season in this locality has been very discouraging to bee-keepers, the honey crop being almost an entire failuse. Bees in general have stored enough honey to carry them through the Winter. G. M. WHITFORD.

Arlington, Nebr.

Peculiar Season.

The season just closed has been a peculiar one for bees. In the Spring they started in with a rush on cherry, maple, and apple bloom; swarmed freely during white clover bloom, and stored some white honey. Then buckwheat came in bloom, and for a week the honey came with a rush. But a change occurred, and during the balance of the bloom the weather was cool and rainy. Fall flowers were a failure as far as honey was concerned. To sum up, the surplus is but little, stores short for Winter, and mostly old bees to Winter. Apples being plenty, the cider mills are running every day, the bees are destroyed by the thousand, and cider stored for Winter food. Still, I hope for the best, and next Spring will tell the tale of the results of the past season.

H. H. BROWN.

Light Street, Pa., Oct. 10, 1891.

Northwestern Convention.

Will each one who expects to be at the Chicago convention please send in his or her name in advance? Put me down as one. It will help us about getting acquainted, and to know beforehand who will be there, and then we like to know, you know. Of course, I mean to have the names printed in the AMERICAN BEE JOURNAL. C. C. MILLER.
Marengo, Ills.

[This is a good idea, and we shall be glad to have each one who expects to be present, to send us the name *at once*, so that we can know how many to provide for at the Commercial Hotel.—ED.]

Honey from Asters.

We are having a spell of rainy weather, which shuts my busy little pets up in their hives at a time when, if they could fly, they would be carrying in big loads of honey. We have had fine weather up to three days ago, and our bees made good use of the time gathering honey from the aster, which is abundant in our county, and is now in full bloom, and if the weather will turn warm, so that our bees can finish up their Summer's work on the aster, we will have a good lot of honey for ourselves, and have plenty in store for the bees this Winter and next Spring. If this wonderful honey-producing weed—the aster—would bloom in June or July, when the days are long, and the weather warm, and the hives brimful of bees, I believe it would be the best honey plant in the United States. One good thing about the aster coming late as it does, is that light frost does not hurt the bloom. I have seen everything white with frost in the morning, and by noon the bees would be gathering honey from the aster in full force.

JOHN D. A. FISHER.
Faith, N. C., Oct. 13, 1891.

Bees in Winter Quarters.

Have put my bees into Winter quarters, in good condition. They gathered no Fall honey, and did not give me 10 pounds of surplus. I took second premium on comb-honey, and first and second premiums on extracted-honey, first and second premiums on beeswax, first and second premiums on foundation, and first premium on supplies, at the Grayville District Fair.
Carmi, Ills. IRA REEVES.

Sugar Syrup in the Sections.

MESSRS. NEWMAN:—I was very much displeased to see my communication to you, in regard to Mr. Lowrey, of Vermont, come out in the AMERICAN BEE JOURNAL. I did not intend it to be published. I am aware that I did not make any statement to that effect, for I trusted to your good judgment not to do such a thing. Further, I am quite sure that I offered to send you a sample of the honey if you desired to investigate. My judgment may have been at fault, and I should not like to condemn a man before the public on the strength of my sense of taste. I desire to apologize to Mr. Lowrey through the columns of the AMERICAN BEE JOURNAL. Be he guilty or not, and I now believe that I was mistaken in the matter, it was an insult to the gentleman to bring his name so notoriously before the public. Please print the whole of this letter.

Yours truly, ALLEN LATHAM.
Cambridge, Mass., Oct. 18, 1891.

[Like thousands of other letters we receive, Mr. Latham's had nothing upon it to indicate whether it was intended for publication or not. We deemed it a note of warning about feeding sugar syrup where there was danger of its being carried into the sections, and then being sold for honey. We cheerfully give Mr. Latham's letter above in *extenso*. It is a pity that he should have written on Sept. 30 what required him to say on Oct. 18, "I now believe that I was mistaken in the matter." Davy Crocket's advice is very appropriate here: "Be sure you are right, then go ahead."

Since the above was in type, we have received a letter from Mr. Lowrey, from which we extract the following:

I say that consistency is a jewel, and adulteration a fraud. I can state truthfully, if it were my last words, before God and man, I never placed upon the market any adulterated honey, or maple sugar or syrup, all of which I produce. I am not afraid to stand back of any of my goods as to purity. I do my best to have them of the best quality possible. There is probably not a stronger advocate or defender of pure food than myself, so far as I am able to do it; and for any one to claim that my honey is adulterated seems next to impossible. I will warrant my honey to be pure bees' honey, every time.

But "Where ignorance is bliss, it is folly to be wise." Where adulteration abounds, all, even the most innocent, are liable to be suspected. In Vermont we have a very stringent law against adulteration of maple sugar and syrup, and bees' honey. Were I called upon to alter or amend the present law, I would say, if possible make the law more stringent, and double the already large penalty.

With malice towards none, but charity for all, even the most ignorant and abusive to our business, I remain,

Yours sincerely,

Jericho, Vt. **Oliver J. Lowrey.**

In our remarks on Mr. Latham's letter, on page 500, we remarked thus about feeding sugar syrup to the bees when and where they might store it in the sections:

> If Mr. Lowrey has inadvertantly permitted this, he should at once recall that unsold, and thus remedy, as far as possible, the evil effect of such a transaction. If he has not done it intentionally, the readers of the Bee Journal would be glad to hear from him.

We are glad to receive and print Mr. Lowrey's letter. He shows the right spirit and principle, and reiterates that oft-repeated expression —"adulteration is a fraud!" He not only knows that his honey and syrups are genuine, but is quite willing to back them up as such. We are now glad that attention was called to the matter, for it has shown us a strong advocate of pure food and its protection by law.

We should not blame friend Latham, either. He found honey the flavor of which was not familiar to him. He had known of a transaction in Worcester, Mass., of feeding sugar syrup to bees and letting them store it in the sections, and of having it take all the prizes at the New England Fair. He was suspicious of the strange-flavored honey, wrote the letter printed on page 500, and offered to send us a sample of the honey. The distance was so great, and several of such samples of comb-honey lately sent to us had been all smashed up in transit, so we printed the letter without further thought, omitting the reference to the sample.

The incident has been harmless—Messrs. Latham and Lowrey are better known, and as both are laboring for the protection of food from aduleration, they may congratulate themselves upon new acquaintance, and form more solid friendship.—Ed.]

Preparation of Bees for Winter.

October forage is now entirely exhausted in most localities, and colonies which are rather light should either be fed, or have surplus honey from other colonies given to them. The extracting cases should be removed previous to colder weather, to prevent bees clustering in them and starving. These cases must be piled up carefully in the coldest room of your honey-house, safe from mice. The exact condition of every colony should be ascertained *now*, and if any are queenless, the colony should be broken up Small colonies ought to be promptly united. The honey selling season is now at hand, and from this time until after the holidays, the producer must look for a honey market. He should not rely on sales in large cities, for they are always crowded, but a home market must be cultivated.

J. W. Minor.

Roxbury, Conn., Oct. 18, 1891.

Michigan State Convention.

To-day finds me at the beautiful home of L. C. Woodman, four miles west of the city of Grand Rapids. I am to make the preliminary arrangements at Grand Rapids for our State convention. I was entirely successful, having secured a very pleasant room to hold our meeting in, on the first floor of the "Eagle Hotel," and I have secured reduced rates, $1.25 per day, and the use of the hall thrown in. This hall is something that all who come here will appreciate. It is easy of access, well lighted, beautifully finished, and furnished with tables and easy chairs. The hotel is centrally located, and one of the best in the city. Friend Woodman is a horticulturist and bee-keeper. He has two yards of something over 100 colonies, and about 60 acres of bearing fruit trees. He has just finished marketing 1,700 bushels of peaches, and I do not know how many pears, plums, apples, grapes, apricots, etc. Yes, apricots in Michigan. If you sat where I now do, you could look out on a bearing apricot orchard, and I shall not be surprised if at our convention we may sometimes drift into horticulture. I think it will not hurt us, if we do. There are a great many around here that are interested in both.

GEO. E. HILTON.

Grand Rapids, Mich., Oct. 21, 1891.

One-Fourth of an Average.

This is my fourth year in bee-keeping, and in that time I have had two poor seasons, and this is one of them. The honey crop in this county will be about one-fourth of an average. One cause of the poor crop was continued rains during white clover bloom.

JOHN W. POLSLEY.

Wahoo, Nebr.

Bees in Good Condition for Winter.

I bought a colony of bees one year ago. They were in the American hive, and wintered well. They increased to 4, and gave me a surplus of 90 pounds of comb-honey. They are in good condition for Winter, with plenty of stores. The Summer has been very cool here, especially the nights. Golden-rod was the principal honey plant here this year. The AMERICAN BEE JOURNAL is a regular and welcome visitor every Friday morning.

J. W. PETERSON.

Grand Island, Nebr., Oct. 22, 1891.

Convention Notices.

☞ The Northwestern Bee-Keepers' Society will hold its annual convention at the Commercial Hotel, corner of Lake and Dearborn Streets, in Chicago, Ills., on Thursday and Friday, Nov. 19 and 20, at 9 a.m. Arrangements have been made with the Hotel for back room, one bed, two persons, $1.75 per day, each ; front room, $2.00 per day for each person. This date occurs during the Exposition, when excursion rates on the railroads will be one fare for the round-trip.

W. Z. HUTCHINSON, Sec., Flint, Mich.

The Executive Committee have fixed the date of the next session of the North American Bee-Keepers' Association, Dec. 8 to 11, at Albany. There will be an informal meeting on the evening of Tuesday, Dec. 8, for getting acquainted, etc. The real work of the convention will commence Wednesday morning, and extend through two full days, ending Friday morning, giving distant delegates time to get home before Sunday. We want all to get there if possible on Tuesday. If they have a few hours of daylight it will give an opportunity to look around the city, view the capitol building, etc. Reduced rates have already been secured in all trunk-line territory, and the same is expected over other railroads The programme is now under way, and other arrangements are nearly completed. If you have decided to take a vacation that will, we trust, be profitable, don't fail to attend this convention.

P. H. ELWOOD, Pres., Starkville, N. Y.
C. P. DADANT, Sec., Hamilton, Ills.

Wavelets of News.

House Apiaries.

The last *Bee-Keepers' Review* is an excellent number. It discusses the subject of house apiaries. In our judgment, the best article on the topic is from the pen of James Heddon, and it covers every point. Among other good things, he says: "Never let any one advocate the use of any hives, frames, cases, or brood-chambers that are fixed within the building."

You are quite correct, Mr. Heddon; and you might have added that they prevent the bees from escaping into the room, for all outside hives are supposed to be bee-tight. One great reason why the house apiary was abandoned, was because the hives or compartments for holding the frames are fixed to the sides of the building, and it is not easy to make these so they are bee-tight.

Again he adds: "The annoyance from robbers is the one great cause of irritability among the bees of an apiary; and I want to tell you that, if you have a colony that is so confoundedly mean that you expect to be stung, even when using the smoker, put them in the house apiary and the bees will behave perfectly." I have noticed this very thing myself; and, in fact, it is a very rare thing indeed for bees to sting inside of a building. To suddenly find themselves indoors takes all the fight out of them.

In winding up, Mr. Heddon concludes: "On the whole, I think the house apiary, when rightly made and managed, is, in many localities, a thing of comfort and profit. It is an easy thing to pack colonies in for Winter; and after being packed, I can see what splendid advantages can be gained from stove heat during extremely cold weather."—*Gleanings.*

Cheap Ice House.

Ice in Summer is both a luxury and a necessity, and the ice-crop is one that many farmers allow to go to waste.

Use 2x6 sills and plates, with 12 foot posts, with three courses 2x4 ribbing all around three feet apart, put in edgewise. Ceil with culls put on vertically, and make it a point to always get out of lumber when you get to the eaves, so the gable end will be sure to be left open. Fill up the ground inside a little higher than the outside, then put down any old old chunks of rails or joist, a little distance apart, and fill in between and cover over with a foot of sawdust, or its equivalent in straw or prairie hay.

Put your ice 16 inches away from the wall, and fill between the ice and wall with sawdust or its equivalent in straw or prairie hay, as you fill with ice. Break joints over each course of ice when filling.

When filled, cover with 6 or 7 inches of sawdust or its equivalent. You do not want 10 or 12 inches of sawdust on top of the ice. There is a latent heat in ice, and if there is too much covering on the top, the heat will not be able to pass up through it and will turn back and honeycomb the ice. With a covering of 12 inches of sawdust, in every case an examination will show heat during the hot months by digging down a few inches.

Never put water on your ice as you fill your ice house, if you expect to remove the cakes of ice as put in. In cold-storage houses it is often the case that water is used to solidify the mass. In such cases use hot water with a sprinkler, as the moment the hot water comes in contact with the ice it congeals. Use cold water and it will run and spread, and if the ice is put in contact with the walls the chances are that in freezing it will spread the building.

The roof may also be covered with culls. Suppose it does leak, the dripping will not extend down into the sawdust to any appreciable extent. A ventilator in the roof is not necessary, with both gables open.—CHAS. P. JACKSON, in the *American Creamery*.

Sexes of Trees.

As a general rule the sexes of both our forest and cultivated trees are only to be determined when the trees are in bloom for the pistillate and staminate flowers are produced either in the same cluster, raceme, bunch, or only separate on the same twig or branch, while in the wild cherries, apples, papaw and similar fruit the organs of both sexes are to be found in each individual flower.

The long catkins of the chestnut, oak, hickory and butternut are the staminate (male) flowers, while the pistillate are small and quite inconspicuous, always situated at the apex of the embryo nut.

In the common red, white and sugar maples, both sexes are in the same crowded umbel-like cluster, inconspicuous at first, but soon the pistillate flowers enlarge and become a two-winged fruit or seed.

But in the box-elder or negundo maple we have a very different arrangement, for the two sexes are not only in separate flowers, but on different trees, and for this reason the species is said to be dioecious—that is, stamens and pistils in separate flowers on different plants.

In the negundo maple the staminate flowers are in small clustered pedicels, while the pistillate are in long drooping racemes, and the two sexes on different trees. Those bearing seeds are of course pistillate (female), but there is no way of distinguishing the sexes of the trees except when in bloom, or bearing seed.—A. S. FULLER, in the *N. Y. Tribune*.

Native Bees in India.

As to the tiny bee of Australia, referred to as *Trigona carbonaria*, I met that bee, or one very like it, in the Central Provinces in India. The manner of our meeting was in this wise: I was leaving my bungalow for a time, and went around to see that its doors and shuttered windows were properly secured before starting. Finding a window with its shutters left open—glass was not used—I hastily slammed it, and a small swarm of *Trigona carbonaria*, or a near relative, flew in my face.

I have never had a shovelful of hot ashes thrown in my face, but the sensation suggested it; and the stings tingled and smarted for a long time. I was much struck by the minute proportions of my assailants, which were, as you say, a little smaller than a house-fly, and their Liliputian comb was elegance itself.—AMANISHAH, Bideford, in *British Bee Journal*.

Just What You Need!

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the BEE JOURNAL (with $1.00 to pay for the same), or 2 subscribers to the HOME JOURNAL may be sent instead of one for the BEE JOURNAL.

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OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

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ALFRED H. NEWMAN,
BUSINESS MANAGER.

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☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

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We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
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Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The 7 above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
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Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
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A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
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Prairie Farmer	2 00	1 75
Illustrated Home Journal	1 50	1 35
American Garden	2 50	2 00
Rural New Yorker	2 50	2 00
Nebraska Bee-Keeper	1 50	1 35

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

◆

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

◆

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

◆

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

YOU NEED an Apiary Register, and should keep it posted up, so as to be able to know all about any colony of bees in your yard at a moment's notice. It devotes two pages to every colony. You can get one large enough for 50 colonies for a dollar, bound in full leather and postage paid. Send for one before you forget it, and put it to a good use. Let it contain all that you will want to know about your bees—including a cash account. We will send you one large enough for 100 colonies for $1.25; or for 200 colonies for $1.50. *Order one now.*

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The Bee-Keepers' Directory, by Henry Alley, Wenham, Mass. It contains his method for rearing queens in full colonies, while a fertile queen has possession of the combs. Price by mail, 50 cents.

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If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00. For sale at this office.

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The Honey-Bee; Its Natural History, Anatomy, and Physiology. By T. W. Cowan, editor of the *British Bee Journal*, illustrated with 72 figures and 136 illustrations. $1.00. For sale at this office.

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HONEY AND BEESWAX MARKET.

NEW YORK, Oct. 23.—Demand is limited, and supply sufficient. We quote: Comb—Fancy white, 1-lb., 14@15c; 2-lb., 12@13c; off grades, 1-lb., 12@13c; 2-lb., 11@12c; buckwheat, 1-lb., 10@11c; 2-lb., 9c. Extracted—Basswood, white clover and California, 6¾@7c; orange bloom, 7@7½c; Southern, 60@70c ⅌ gal., as to quality. Beeswax, steady, 25@27c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, Oct. 24.—The demand is good, and supply fair. We quote: White comb, 15@16c; dark, 10@12c. Extracted, white, 7@7½c; dark, 5@6c. Beeswax, is in light supply, and demand good, at 23@26c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Oct. 24.—Demand is only fair, with good supply. We quote: Choice comb, 14@16c. Extracted, 5@8c. Beeswax is in fair demand and good supply, at 23@25c for good to choice yellow.
C. F. MUTH & SON,
Cor. Freeman & Central Aves.

NEW YORK, Oct. 23.—Demand for honey is increasing, but is exceeded by supply. We quote: Fancy 1-lb. comb, 15@16c; 2-℔., 14c; fair, 1℔., 13@14c; 2-℔., 13c. Extracted—California, 7c; clover and basswood, 7@7½c. Beeswax—in fair demand, with adequate supply, at 25@27c.
CHAS. ISRAEL & BROS., 110 Hudson St.

CHICAGO, Oct. 26.—The demand is good for fancy white comb-honey, and all such is selling at 16c; other grades, 14@15c. Extracted, 7@8c. Beeswax, quick sale, at 26@27c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Oct. 24.—Demand for honey good, with light supply. We quote: Comb—1-lb. white, 16c; dark, 12c; 2 lb. white, 15c; dark, 10c. Extracted—white, 7@7½c; dark, 5@6c. Beeswax, supply and demand light, at 25@27c.
HAMBLIN & BEARSS, 514 Walnut St.

DETROIT, Oct. 24.—The demand for comb-honey is fair and supply small. We quote: Comb, 12@13c; extracted, 7@8c. Beeswax in good supply, and light demand, at 25@26c.
M. H. HUNT, Bell Branch, Mich.

CHICAGO, Oct. 26.—The demand is slow for 1-℔. comb-honey, with good supply. We quote: Choice white comb, 14@16c. Extracted, 6@8c. Beeswax, in light supply, and demand slow, at 27c. J. A. LAMON, 44-46 S. Water St.

ALBANY, N. Y., Oct. 23.—Demand improving; supply moderate. We quote: White comb, 12@17c. Extracted, 6@8c. Beeswax, scarce and in good demand at 26@28c.
H. R. WRIGHT, 326-328 Broadway.

NEW YORK, Oct. 23.—Demand good, with fair supply. We quote: No. 1 comb, 16c; No. 2, 13@14c. Extracted—California, 7@7¼c; basswood, 7¼@8c; Southern, 65@70c per gal. Beeswax, supply and demand fair, 26½@27c.
F. G. STROHMEYER & CO., 122 Water St.

SAN FRANCISCO, Oct. 21.—Demand good, supply small. We quote: Comb, 1-lb., 10@13c. Extracted, 5¾@6c. Beeswax, in light supply and good demand, at 24@25c.
SCHACHT, LEMCKE & STEINER,
16 Drumm Street.

CHICAGO, Oct. 24.—Demand is now good, supply is not heavy. We quote: Comb, best grades, 15@16c. Extracted, 6@8c. Beeswax, 26@27c.
R. A. BURNETT, 161 S. Water St.

BOSTON, Oct. 23.—Demand is good, supply ample. We quote: 1-℔. fancy white comb, 15@16c; extracted, 7@9c. Beeswax, none in market.
BLAKE & RIPLEY, 57 Chatham St.

MILWAUKEE, Oct. 24.—Demand not very brisk; supply good, and of better quality. We quote: Comb—choice, 1-lb., 15@16c; fair, 13@14c; dark, 10@12c. Extracted—white, in barrels or kegs, 7@7½c; dark, 6@6½c. Beeswax, 25@28c.
A. V. BISHOP, 142 W. Water St.

NEW YORK, Oct. 23.—Demand active, and supply increasing by large arrivals. We quote: Fancy 1-lb. comb, 14@17c, depending on quality; 2-℔. sections, 2c less. Extracted—White clover and basswood, 6@8c, and supply not equal to the demand. Beeswax—the supply is not equal to the demand, which is brisk, at 26@29c, as to quality.
F. I. SAGE & SON, 183 Reade St.

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◆

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JOHN H. ROHRER.
Tippecanoe City, O., July 16, 1891.

◆

☞ The Union or Family Scale has been received, and I am much pleased with it. W. H. KIMBALL.
Davenport, Iowa.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line,** for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

WANTED—TO EXCHANGE—New steel-point, foot-power mandrel, 2 7-inch saws, vegetable seeds, for World Typewriter or offers. G. M. WHITFORD, Arlington, Neb.

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WANTED—HONEY—I wish to purchase 1,000 pounds of basswood or clover Extracted-Honey. Would be pleased to receive price delivered here. State kind of package.
17A2t P. P. CARTER, Scranton, Pa.

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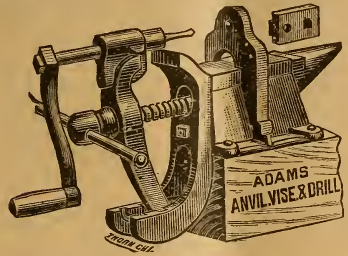

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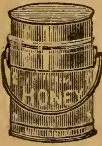
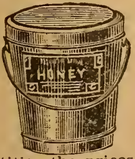
THESE Pails have full covers, and are excellent for selling Honey in the Home Market; and after the Honey granulates in them, it can be shipped anywhere with perfect safety. All sizes have a bail, or handle, and when empty are useful in every household.



The engraving shows STRAIGHT TIN PAILS, of which there are 3 sizes, holding respectively 3, 5 and 10 lbs. of Honey. Assorted Samples of the 3 sizes will be sent by express for 40 cts. In quantities, the prices are:

	Per doz.	Per 100
Gallon, holds 10 lbs	$1.80	$12.00
½-Gallon, holds 5 lbs.	1.50	9.00
Quart, holds 3 lbs	1.20	7.00



The second engraving represents THE TAPERING TIN PAILS—made heavier and stronger than those with straight sides. The covers are deeper, and the top-edge of the Pail is doubled over, making it smooth and convenient to handle. Of the Tapering Pails there are five sizes, viz: 1-lb., 4-lb., 7-lb., 13-lb., and 25-lb. Assorted Samples of these will be shipped by express for 75 cents. In quantities, the prices are as follows:

To hold	1-lb.	4-lbs.	7-lbs.	13-lbs.	25-lbs.
Per dozen,	$ .75	$1.25	$ 1.50	$ 2.00	$ 3.25
Per 100,	5.00	8.00	10.00	14.50	23.00

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12A26t

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THIN FLAT BOTTOM FOUNDATION

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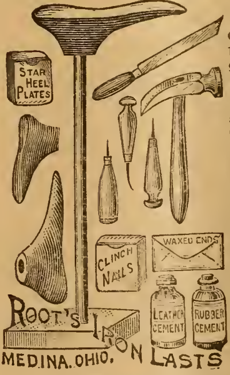

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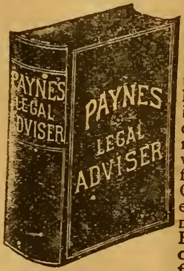

Payne's Legal Adviser—Is a new epitome of the Laws of the different States of our Union and those of the General Government of the United States, and will be found invaluable to those who are forced to appeal to the law, as well as to that large class who wish to avoid it. The whole is alphabetically arranged so as to make reference to it easy. This work also contains legal forms of Deeds, Mortgages, Contracts, Assignments, Power of Attorney, Acknowledgements, Builders' Contracts, Bills of Lading, Bills of Exchange, Affidavits, Certificate of Incorporation, Form of Release, For Sale Contracts, Responsibilities of Common Carriers, Proofs of Loss, Leases, Assignment of Lease, Articles of Partnership, Notice of Dissolution. Deed of Trust, Bill of Sale, Wills, etc., etc. Large 12mo, cloth, 300 pages. Price **$1.50.**

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THOMAS G. NEWMAN,
EDITOR.

Vol. XXVIII. Nov. 5, 1891. No. 19.

Editorial Buzzings.

It Looks very much as if we were in for a hard Winter. The weather prophets threaten us with a number of killing blizzards.

* * *

The North American Bee-Keepers' Convention will be held at Albany, N. Y., Dec. 8 to 11. Reduced rates on all the trunk line railroads are secured. Read the notice on page 596.

* * *

Geo. E. Hilton has been appointed by the Board of World's Fair Managers for Michigan, a member of the special committee on apiarian products. It would have been about the right thing to have made George chairman of the national committee on that "subject," as there is probably no better authority on matters concerning the apiary than Mr. Hilton.—*Fremont Indicator.*

Spraying Fruit for the prevention of the ravages of insects and fungus diseases is no longer an experiment, but a necessity, in order to get large crops of perfect fruit, but the blossoms must not be sprayed with the poison.

As noted on page 423, the New York City Board of Health recently condemned grapes on the market that showed signs of poison on the stems, and had tons of them destroyed. The hasty action of the Board caused a grape panic.

An investigation showed that the grapes had been sprayed with a solution of the Bordeaux mixture, and that traces of the sulphate of copper remained on the stems.

The matter was referred to the Department of Agriculture, which has for several years been recommending the spraying of grapes with this mixture, as a preventive against fungus diseases. The Department officially replied that over a ton of grapes, sprayed eight times with the mixture, would be required to furnish a single poisonous dose.

In this transaction, the spraying of fruit has received an advertisement that will result in making known its merits far and wide. For, after consumers understand it, they will not hesitate to purchase perfect fruit because of the means used to make it so, as long as they are harmless, and applied at an appropriate time, so as not to endanger the lives of our honey gatherers.

For full information on this subject, as well as the necessary outfits for doing the work thoroughly and effectually, address William Stahl, Manufacturer of Excelsior Spraying Outfits, Quincy, Ills., who will send free a full and complete treatise on the spraying of fruit.

* * *

Honey Candy.—This recipe was published in a late number of the *Ladies' Home Journal :*

Take one pint of sugar, with water enough to dissolve it, and four tablespoonfuls of honey. Boil until it becomes brittle on being dropped into cold water. Pour off into buttered pans to cool.

The Time will soon be here for the Northwestern Convention to be held, and the indications are that it will be well attended. Chicago is the center of the great West, and as it was said of old Rome, that all the roads led to it, so it may be said of Chicago, that all the railroads lead to it. The Fat Stock Show will be held at the same time in this city, and all railroads will have reduced fare. The time is the best that could have been hit upon, and bee-keepers can come and not only enjoy the "reunion" and seeing the grand exhibition of fat stock, but witness the growth of the great metropolitan city of the Northwest. Many will want to do some "trading," and this will give them the opportunity. So we may as well invite you all to come and bring "your sisters and cousins and aunts," and have a good time.

Mr. Dabb, the popular proprietor of the Commercial Hotel, the headquarters of the bee-keepers, will do his level best to welcome and provide for all who may come, and the experience of all, during our former conventions, goes to show that he can entertain all his guests to perfection.

The following has just come to hand from the Secretary, and confirms our statement made above, that the meeting will be well attended by bee-keepers generally. Brother Hutchinson makes these remarks about the prospects:

> FLINT, Mich., Oct. 28, 1891.
>
> FRIEND NEWMAN:—The Chicago convention will be a good one this year. Every day brings me letters saying that the writers will be present. Bee-keepers from Illinois, Indiana, Ohio, Michigan, Wisconsin, Missouri, Kansas, Iowa and Minnesota have written to me that they were going to the Northwestern Convention. W. Z. HUTCHINSON.

◆

Ground Cork is the best packing material for bees in Winter. It never becomes damp, and it is a thorough non-conductor. It is so cheap that its cost is practically nothing.

The Third Visit of *la grippe* is confidently expected during the coming Winter. The following from an editorial in the Chicago Daily *Post* shows how the matter is viewed by those on the look out for coming events:

> The news comes from Germany that the beginning of Winter finds 500 cases of influenza in Silesia. It is useless to expect that the same winds which blow the poison germs across Europe will not also waft them over the Atlantic, and bind the Western Hemisphere with a broad girdle of disease. The new appearance is said to have originated in Russian churches, in an atmosphere breathed over and over again by the most wretched and dirty people in Europe.
>
> Formerly the Mohammedans at Mecca had credit for every pestilence; now the Greek branch of the Christian church—of which the czar is sovereign pontiff—is the head and front of the offending.
>
> Medical science in the United States will now be called upon for its most strenuous efforts. Two Winters ago the epidemic slew its thousands, and last Winter its tens of thousands.
>
> If a specific has not been discovered by this time, it is probable that systems weakened by the former attacks will give way in still greater numbers.
>
> Experience, however, must now have something to go upon in dealing with the earliest symptoms. Influenza, in any of its forms, should not be a closed book to the medical profession. Every public health office in the country should be made an agency for the diffusion of information as to the latest and most successful methods of dealing with the enemy.

◆

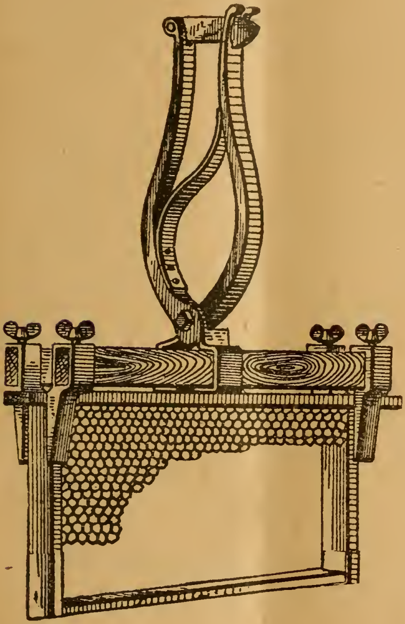
The Wintering Problem in Bee-Keeping; an Exposition of the Conditions Essential to Success in the Winter and Spring Management of the Apiary, by G. R. Pierce. This is the title of a new pamphlet of 77 pages, just issued by the author, who has had 25 years' experience in bee-keeping, and for the past 5 years has devoted all his time and energies to the pursuit. Price, 50 cents. For sale at this office.

◆

Do Not Forget the meeting of the Northwestern Convention, on Nov. 19.

Frame Holder.—Here is another patented article—"Holt's adjustable tongs, for handling frames in bee-hives." The inventor has this to say about its use:

The tongs are so made that they will fit any size or length of frames, and the fingers reach down and grip the top and sides of the frame in such a manner as not to injure the comb, honey or brood in any way, and the tightest stuck frame can be torn from its place with the tongs without the slightest injury to the frame, comb or brood.



In using the tongs the operator has one hand free all the time, while with the other he can hold the frame in any position desired. He is not in the least danger of being stung, as his hand is not near the bees. And his fingers never get cramped or tired, as the tongs grip and hold the heaviest frame of honey, and will not turn loose until the operator throws the catch at top of handles. One man can attend to twice the number of hives with the use of the tongs that he can without them, and amateurs are not in the least afraid of being stung while using the tongs, and practical bee-men say the tongs are as much a necessity as a smoker is in the apiary.

It is Proposed to hold a convention of Southern bee-keepers on Nov. 11, at Augusta, Ga., during the Exposition. This day will be the Bee-Keepers' Day at the Exposition. They meet together to compare notes, to discuss questions pertaining to the business, and to consider means to make the pursuit more remunerative to the honey producer. Essays will be read and discussed by some of the leading bee-keepers of the country, and a number of distinguished apiarists from a distance are expected. Southern apiarists should lay aside their work for a day and attend this meeting. The railroad fares will be reduced to 1 cent per mile, and it will be at the height of the Exposition.

As this is at the home of our friend Dr. J. P. H. Brown, all may be sure that the convention will be a grand success. This notice came one day too late for insertion last week, so let all bee-keepers who can do so arrange *at once* for a grand reunion at Augusta, Ga. The committee who sign the call are the following:

J. P. H. Brown, Augusta, Ga.
W. K. Nelson, Augusta, Ga.
J. W. P. Whitley, Gibson, Ga.
Dr. G. N. Ivey, Wrightsville, Ga.
Dr. J. W. Hudson, Maysville, S. C.
H. H. Wethersbee, Jackson, S. C.
J. L. Jones, Davisboro, Ga.
W. S. Hart, Hawk's Park, Fla.

We were invited to attend, but we could not possible do so—our present health and strength precludes the thought of our attending many conventions this Fall.

Apiarists of Europe should note the following, and prepare to send an exhibit to the World's Columbian Fair:

The Atlantic Transport Company, operating a line of steamers between London and New York, has agreed to carry exhibits from London to either New York, Philadelphia, or Baltimore free of charge, except the actual expenses of loading and unloading. This generous proposition makes it possible for European exhibitors to have their displays brought to the American seaboard practically free of charge.

Golden Weddings occur but seldom—so few live to reach 50 years of wedded bliss. The following from the Hastings (Minn.) *Gazette* records one of the few "golden weddings:"

The home of Mr. and Mrs. William Dyer was the scene of a brilliant party on Sunday afternoon, Oct. 18, it being the fiftieth wedding anniversary of this worthy and highly esteemed couple, who are among the oldest inhabitants of Hastings, having removed here from Kendallville, Ind., some 27 years ago.

The affair was one long to be remembered, four generations being represented. The house was adorned with rare flowers, and redolent with their fragrance, and the repast was both elegant and bounteous.

The words "Golden Wedding" were inscribed in golden letters upon the wedding cake, and the bridal cake was tastily decorated with white flowers and leaves, while the presents were such as will ever remind the recipients that their friends appreciate them in the highest degree.

Amy Oliver, a lovely golden-haired girl of five years, also presented them with a golden eagle—the gift of their neighbors.

The Honey Crop in the Antelope Valley, California, is thus described in the *Rural Californian.*

The yield of honey in Antelope Valley, Calif., for four years in succession has been above the average, both as to quality and quantity. Climatic conditions there are favorable to the growth of shrubs and flowers that yield an abundance of nectar.

While the bee-keepers near the coast, and in the valleys contiguous, have been feeding their bees in the early part of this season, the bees in the Antelope Valley, and what was once regarded as the Mohave Desert, were gathering surplus honey, and making money for their owners.

This may be put down as an off year, and an unprofitable year for the bee-keepers of Southern California generally. The crop of honey will not be more than 50 pounds to the colony on an average. True, some localities, notably Antelope Valley and the vicinity of Temecula, with some other points, will yield a full crop, but in many places not a pound of honey was produced this season. Two hundred pounds to the colony is a fair yield, and may be termed a good crop. Six hundred pounds to the colony has been produced in extraordinary years like 1876, 1878 and 1884. For this year, some apiaries in or near Antelope Valley have come up to the yield of 1884, and in one instance that we know of, under good management, the yield of honey was close up to 300 pounds to the hive. Good for Antelope Valley.

Cough Remedy.—A good cough mixture, from the *Medical World*, is as follows: Cod liver oil, 2 ounces; honey, 2 ounces; lemon juice, 2 ounces; 1 or 2 tea-spoonfuls three times a day.

A Beginner in bee-keeping in California is said to have had an exceptionally good crop. The *Farm, Field and Stockman* says that he purchased 100 colonies of bees last Spring, and during the Summer they secured 12,000 pounds of honey—that is 120 pounds to the colony.

Next Wednesday the Connecticut State Convention will be held. See official notice on page 596. Let all those who can do so, make arrangements to attend.

The Summer was a cool one, but September was "red hot." The bees could not appreciate the former, and gained but little from the latter.

If You Have any honey to sell, get some Honey Almanacs and scatter in your locality. They will sell it all in a very short time.

When Writing a letter be sure to sign it. Too often we get letters with the name of the post-office, but no County or State. One such came recently, and we looked into the Postal Guide and found there were places by that name in 13 States. That order for goods will have to wait until another letter comes to give the proper address. Be sure to stamp your letter, or it may go to the dead letter office.

Queries and Replies.

Reason or Instinct in Bees.

QUERY 791.—I desire to know the views of the prominent bee-keepers of America on this question: "Do bees reason?"—Mass.

No.—G. M. DOOLITTLE.

Not that I know of.—C. C. MILLER.

I do not think it can properly be said that bees reason.—R. L. TAYLOR.

It appears from some of their actions, that they do.—MRS. L. HARRISON.

We think they do; and proportionally much more than many human beings.—DADANT & SON.

I think not; but some of their actions would almost lead one to think that they did.—C. H. DIBBERN.

No. If they did the last few thousand years would have improved their practices.—EUGENE SECOR.

There is something akin to reason in many of their manœuvers. Yet, like Dr. Miller, "I don't know."—J. M. HAMBAUGH.

Who can tell where to draw the line between instinct and reason? I believe that every animal that thinks, reasons. An argument on this question would fill pages.—JAMES HEDDON.

Bees may recognize their keeper from strangers, and may get so accustomed to persons passing near them as to seldom or never sting them. This is about as near to the reasoning faculty as they appear to get.—G. L. TINKER.

Sometimes it is very difficult to draw the line of demarkation between reason and instinct. They do not always work by invariable law. Yet the same instinct that prompted "Samson's bees" in the lion's carcass, prompts to action the bees of to-day.—J. P. H. BROWN.

That depends somewhat on what is meant by reason. They do reasonable as well as unreasonable things. Some of their operations seem very much like results of reason. But as no man has had experience of a bee's mental processes, if it has such processes, how can we tell?—M. MAHIN.

Why not write to "the prominent bee-keepers" and ask them. If it is instinct that leads bees to do as they do, it is a pity that a great many people do not have instinct to guide them; and if it is reason that guides people, it is a good thing for the bees not to be directed by such an erratic concern.—A. B. MASON.

I think they do in a way. They use bee reason. I go up to the hive quietly, they are amiable. Do they not reason thus: "His intentions are friendly. 'Let us have peace.'" I go to the hive rudely, they resent it. Do they not reason: "An enemy has come. We will drive him hence?" At least they do, or act very much as we do when we act from reason.—A. J. COOK.

Well! Well! Is not this rather getting into the realms of fancy? Why not ask, does a horse, cow or dog reason? The difference between instinct and reason, in some cases, seems slight, but instinct always and invariably does the same thing in the same way, and that way is the same as from the beginning, while reason guides us to the path of invention, and we improve. The bee stores honey, or builds cells after the old rule. We guide and direct, so that the honey is so stored as is most advantageous to us. Discussion here is of no value, as the matter is wholly one of surmise; and really whether it is reason or instinct that causes the bees to build their cells in just that form that uses the least material, to fill the greatest space, is of no great consequence, especially when, after all is done, it is only a matter of surmise.—J. E. POND.

O, no! Bees are governed by instinct. How often have you seen bees thumping their brainless heads against a pane of glass when a little "reasoning" would teach them that the glass was harder than their heads. Bees are endowed by Nature with a high order of instinct, but they do not "reason." Glass and other human inventions are not natural to bees, and, therefore, their instinct fails them, and they have no reasoning powers to help them out of the dilemma. Bees never, *never* "send out scouts," as some superstitious old fogies blindly assert and believe. They find their homes by the echo produced by the sound of their wings from any hollow place when passing it. Just like bumble-bees will pounce into an open mouthed jug, when set near their nest. How often I have seen a swarm of bees pass good homes and enter a worthless dilapidated hole because the sound of their wings acted in the one case and not in the other. If bees reasoned they would build comb when there was little honey to store, in order to be ready for the honey when it does come in quantity, but this they never do, because they cannot reason.—G. W. DEMAREE.

Yes; there are proofs in abundance to show that bees do reason, but this Department is not large enough for their enumeration. We refer the inquirer, and all others interested, to the article on another page on this subject, written by M. L. Holbrook, M. D. It gives convincing proofs of intelligence in bees.—THE EDITOR.

Topics of Interest.

The First Bee-Escape.

C. H. DIBBERN.

I have carefully read Mr. Silcott's article on page 522, and will say that I have no desire to keep up the controversy. However, I wish to correct a few errors and misstatements. Mr. Silcott's general conclusions as to the working of bee-escapes, is quite correct. Mr. S.'s claim of inventing the first horizontal bee-escape, has fallen to the ground, as his patent is antedated by the one of 1860.

Now, as well as one can judge by an illustration of it, and his claims as published, it would seem that they are very similar. To say that this could not be, or the Patent Office would not have issued a second patent on a similar device, will not do. That thing seems to be a common occurrence, as the 10,000 patents on bee-hives abundantly attest.

I said in a former article, that Mr. Silcott's escape was probably an antiquated and worthless affair; but if it was really a good and valuable invention, then he is the more to blame for keeping "dark" about it—at any rate, in not advertising it loud enough, so that at least one bee-keeper in a thousand would know of its existence.

A good bee-escape, during the nine years that this patent has been allowed to slumber in sweet oblivion, would have been worth thousands of dollars to the fraternity.

Mr. Silcott then tries to make out that my escape, which is the common property of the bee-keepers of America, is somehow and infringement on his, on general principles, I suppose, though he does not threaten a "big suit in the United States court."

Had it not been for Mr. Reese, myself and others, would his escape not still be sleeping the sleep that knows no waking?

Mr. S. says that the principle of my escape is not new to him—that he tried it years ago and failed. If that is so, it is an indirect compliment to me, as I have succeeded.

When he claims, like Mr. Demaree, that bees will return through any kind of an escape where some obstruction is not used, he is simply mistaken. In my new escape they do no such thing, as the hundreds of my escapes in use during the past season abundantly testify.

The intimation that my "Little Giant" must be a complicated arrangement, because I use broom wire, is overdrawn. The fact is, it is about as simple as any, and so far is the most rapid working escape I know of, and I have tried about everything in this line.

I have tried Mr. Wilcox's escape, through which he claims the bees will escape in droves. My experience with it is a good deal like Mr. Silcott's. During the recent hot weather, I had a number of double hives, with a queen-excluding honey-board between, using the upper story to extract from.

After reading Mr. Wilcox's description, and the rapidity with which his escape would empty the supers, I thought that perhaps after all we had all been on the wrong track.

I had little difficulty in making an escape, as Mr. Wilcox had described it, and while I was making it, I kept picturing to myself the droves of bees escaping where I could see them, out of super to the hive entrance.

Well, about noon I had the escape ready, and placed it under one of the extracting supers.

After dinner I went at once to the hive, expecting to enjoy the fun of seeing the bees "escaping in droves." Instead, however, only a few excited bees would run down a little ways, and then return to the super. This was quite a disappointment to me, as I had expected more of it.

I concluded to give the bees their own time in leaving, and, after two days, there were still about a quart left. Now, this escape on further trial may do better, or I may not have got it just right. Let us try all things, and "hold fast to that which is good."

Milan, Ills., Oct. 30, 1891.

Intellect and Instinct of Bees.

M. L. HOLBROOK, M. D.

My first acquaintance with bees began when I was a little boy. The old log school-house where I learned to read and to spell was on the edge of a wood. The cleared ground near the wood was in those days well grown over with thistles, and when they were in full blossom large numbers of bumble-bees collected on them to gather honey, which the greater length of their proboscises than that of the honey-bee enabled them to do.

I took my first lesson in entomology, as far as I can remember, in the study of these bees. One day a number of the school boys indulged in a common sport of seizing bees by both wings and holding them without being stung.

Naturally I tried the experiment, but secured only one wing, which left the bee free to turn over and thrust its sting deep into my finger. It was my first experience of this kind, and the pain was very intense; but not caring to be laughed at by the other boys, I took not the slightest notice of it.

I have since thought that the control over the feelings which children often exhibit on account of their pride is a valuable discipline preparatory to the greater self-control required in mature years. Be this as it may, I have ever since had a profound respect for every kind of bee, and cultivated their friendship whenever I have had an opportunity.

I have never been able to examine their nervous system as a phrenologist does the brain of man, but under the microscope I have convinced myself that it has a very fine one, that its brain cells or ganglions are of the same kind as those of man, and that in proportion to its weight it has as much nervous tissue, if not more, as human beings.

I propose to mention some of their intellectual characteristics. In the first place, the bee has an excellent memory, especially of locality. You may carry them miles away from home, and the greater part will find their way back. This experiment has been tried on the bumble-bee. A considerable number were taken three miles from their home, and all came back; then another lot were taken six miles, and most of them returned, after which they were taken nine miles away, and even then a few found their way to their nests; and it is more than probable that those which failed to do so may not have had physical strength for so long a flight, or possibly they were young bees without experience.

This memory of places must be of the highest usefulness to the bee, obliged as it is to go far from home to gather sufficient food for its needs, and the faculty has without doubt been developed by culture, and transmitted from one generation to another for a great period of time.

The memory of the bee for the particular plants which furnish it with honey is also very highly developed. I have observed how quickly they recognize those plants which serve their purpose from those which will not, and how little time they waste in trying to gather honey where none is to be found.

The bee has a very excellent knowledge of dietetics so far as the subject can be of service to it; a knowledge, which could only have been acquired by a high order of intellect, or an intelligence quick to take advantage of any experience which had accidentally proved serviceable during any period of its existence.

This is shown by its conduct in the employment of food for different purposes. A hive of bees is composed of three kinds—drones, or males, the queen-bee, and female workers, which are all undeveloped queens. It is by the application of their knowledge of the effects of food on development that they are able to produce workers or queens as they wish. A worker is the result of insufficient nourishment. The larvæ are fed on food which only develops workers. If during the first eight days of the life of a larva. it is fed on royal food, the reproductive organs and instincts become fully developed, and the larva becomes a queen.

Royal food is a highly nitrogenous diet composed of the pollen of flowers. The insufficient nutrition which develops workers, but not the reproductive instincts, is less highly nitrogenous—indeed is largely carbonaceous.

In case the queen dies, or is lost, the workers at once set about providing for a new queen by feeding a larva at the proper time with this highly nitrogenous food.

I think this compels us to believe that they do it consciously, and that the colony of bees also rear workers consciously, for it is only by an abundance of workers that the colony can exist. How can they know, except by highly developed intellect and inherited experience, that one kind of food will produce one effect, and another kind another?

There is a remarkable difference in the mental traits of queens and workers. The queen knows that it is not well to lay eggs when there are not workers enough to feed and care for them. This is a most *reasonable* procedure, and one which human beings might study to advantage.

She is also aware of the fact that it is not well to have too large a number of drones, who eat honey and do no work, and so she produces them at will—by laying unfructified eggs to the extent to which drones may be required, and no more.

That bees reflect and adapt their conduct to their requirements is, it seems to me, evident from the fact that when carried to countries where they find supplies of food all the year round, they cease to store it up. They do not do this immediately, but only after they have learned that it is unnecessary.

In Australia, where food is abundant most of the year, in order to have honey it is necessary to import new queens that will produce workers which have not had experience in that country. And if they cease to store up honey when experience tells them it is not needed, is not the opposite true that when they do store it up in those climates that have long Winters, they do it consciously, and with a full knowledge of the need they will have for it?

Again, why do bees pursue and sting one who robs them of their honey, if they do not know its value?

It has been stated on very good authority that the Italian bees will sometimes attack in mass a man who has robbed their hive, days after the occurrence, as if to destroy him.

And this brings up the fact that they have a very good knowledge of human nature, and know their friends from their enemies, if not perfectly, reasonably well.

In placing comb in new and difficult places, they show a diversity of practical engineering talent which entitles them to much credit.

Another instance of the intellect of bees is shown by the fact that when in hot weather they find their hives illy supplied with air, of which they require much on account of their great activity, they station a number at the entrance to the hive who use their wings vigorously, driving a considerable current within. To be able to remain in their places, they seal their feet to the floor, otherwise they would fly away, so active are their movements.

I might mention other facts, but these are sufficient for my purpose. I know that many, even naturalists, will say that all these acts are purely instinctive, and not the result of reflection or reason.

Let us look into the matter a little more closely. What is instinct? Dr. Reid defines it as "a blind impulse to certain actions, without having any end in view, without deliberation, and often without any conception of what we do."

In other words, instinct is the power of acting without reflection, but in a manner so as to achieve an end, the same as if reason and intelligence had been used, and always in response to some internal stimuli, depending on some necessity requiring such action.

Instincts are always inherited. They are the results of the experience of ancestors for so long a time as may be required to organize them into the structure of the nervous system, so that they become a part of its property. In order that any act may become instinctive, it must be performed in every way many times, so that it "does itself."

When a new act comes up that has never been performed before, or performed only a few times, then it seems to me reason and reflection are required. After a while the act may become partly instinctive and partly the result of reason, for some instincts are imperfect.

Now, I shall refer to only one of the acts mentioned above, that of building a comb of a particular form to fit into a place such as in all probability the bee or its ancestors could never have had to do before. The building of the comb would be easy, but to get the right form and size it would be necessary to think, to reflect, and to distinguish between the right way and the wrong one. This would be an act of reason, of deliberation. It may be said that there is not sufficient brain substance in the bee to allow of such complicated mental operations.

I think this is begging the question. How do we know this? Who has given us any right to make such a statement? Is it not a bit of egotism in man to claim that he alone thinks, plans, reflects, and adapts means to ends? Man is fairly well adapted to his realm, the bee, the beaver, and every animal to theirs, and all when necessary have the power to think, to deliberate, and to keep their plans long enough in their minds to execute them, or to change them if need be; also to see the difference between one plan and another, to compare them, and probably to rejoice when they have triumphed over obstacles which may at first have seemed insurmountable.—*Phrenological Journal.*

Melting Wax—Small Hives for Nuclei.

S. F. TREGO.

I have just found a new (?) arrangement for melting up old combs. It is a lamp nursery, such as is used in rearing queens. Mine is 18x18x10 inches, inside, and is surrounded by one inch of water, except the top.

Fill the space between the walls with water, remove all of the lids from the stove, and put the nursery in their place, then put some water in the nursery (use your own judgment as to the amount), and pile your old combs, etc., in the water. Lay some slats over the top, and cover with some kind of a mat to keep the heat in.

As the wax melts, put in more. Strain in the usual way. Do not fill the space between the walls quite full of water, or it will boil over. Do not stop up the hole where you put the water in, or you will have a boiler explosion in short order.

Covering the top will hold the steam on the top of the wax, and melt it much faster than if the steam is not kept in, but the covering must be something that will let the steam escape slowly.

This melter is much better than a wash-boiler in several ways. First, it is larger; second, it heats quicker because it exposes twice as much surface to the fire; third, and best, you cannot burn the wax, no matter how much fire you make.

I do not know that it would pay to get a boiler like this made just for melting wax, but if any one wishes to try it they can get a tinner to make one for $3.00 to $3.50.

If you have any wax to melt—by any process, except solar—do it when the bees cannot fly, or they will be into it if they can possibly get to it.

I want to say that small nuclei are a nuisance. In 1890 I used 19 of the Pratt style until the bees absconded, and, if I remember right, I got 3 queens from those 19 nuclei.

Then I reasoned that if I had some to work on the Pratt system, with frames twice as large, they would work O. K. So in February, 1891, I had 200 hives made to hold 3 frames ⅜ as large as the Langstroth frame. These worked some better, but I was kept busy from noon until 2 p.m., hiving absconding nuclei, and sometimes I would put in half a day trying to keep them from leaving.

I fed them whenever there was any danger of their starving, but still they swarmed. Following are a few of their tricks: Following the queen when she flew out to mate; absconding a few hours after I had shipped their queen; absconding if I did not take the queen out before she had all of the combs full, and refusing to accept virgins—killing twice as many as larger nuclei.

I shall remodel the bodies of those small hives into feeders, melt the combs, and use the frames for kindling the fire.

The next hives I have made will be 4-frame Langstroth, and I claim that with them I can rear *more* queens from a certain number of colonies with *less work*, and when Fall comes two or three of these nuclei will make a colony, while the small ones will not be worth uniting.

It is a waste of bees and loss of money to use these small hives. A good nucleus will gather 10 to 15 pounds of honey in September here, and seal it up so that it makes good Winter stores.

No man can *give* me any more of those small hives, even if he fills them with bees, provided I have to use them one season.

Swedona, Ills., Oct. 14, 1891.

The Illinois State Fair.

MRS. L. HARRISON.

It has come and gone, and was a grand success, the gate receipts being a little more than last year. The weather was cut off from the very best web; on Monday there was a very hard shower which laid the dust, but the rest of the week was uncommonly warm and pleasant, creating a demand for cool drinks and ices.

Visitors were in the best of spirits, and I heard no complaints from any source, with two exceptions—one was with reference to what constitutes a colony of bees, and the other with reference to helper's tickets.

THE APIARY.

The honey and bee exhibit was fair, and the association granted abundant space for its display. I think that Iowa sent the largest display of comb-honey; but Illinois took the first premium for the choicest comb-honey, and Iowa for extracted. Mr. A. Coppin, of Wenona, Ills., surprised us all by his exhibit of choice white one-pound sections, and we eagerly inquired how he obtained it. He assured us that it was gathered from white and sweet clover, which was very abundant in his neighborhood. It is strange, yet true, that only a few miles from his apiary bees gathered little or no honey. There were rains the preceding season which brought up the clover in hls locality, while in others there was none.

A COLONY OF BEES.

There was some dissatisfaction among exhibitors as to what constitutes a colony of bees. One frame of brood covered with bees, and containing a queen had been entered and accepted as a colony, and the queen also entered in competition with others on exhibition. It has been the custom among the fraternity to call all small colonies containing two or three combs, a nucleus, and those who had on exhibition hives, such as they used in their apiaries, containing from eight to ten frames, were dissatisfied with the result. The subject of what constitutes a colony of bees will no doubt receive a fair amount of discussion in the bee-periodicals of the country, and a decision arrived at.

REUNION.

A very pleasant reunion was held around the honey exhibit, new acquaintances made, and old ones revived. The Hon. J. M. Hambaugh, of Spring, Ills., in company with Mr. Edwards, was present, and very cordially welcomed. Mr. Hambaugh has a warm place in the hearts of all Illinois bee-keepers for his indefatigable work in the halls of legislation during the past Winter. He originated, among others, two important bills for their benefit, namely, the bill appropriating $500 for publishing the annual report of the Illinois Bee-Keepers' Association. The other is entitled the "Spraying Bill," which passed the House, but was tabled in the Senate.

Mr. Hambaugh desired to impress upon us all that idea which I have often expressed, that the honey that bees gathered was only in secondary importance to their great work of fertilization of flowers. It is true that there has been but little return from the bees in the way of honey through the past three years, but there has been crops of fruit as the result of their labors.

Now a person might suppose that where there is a perfect flower there is no need of a foreign agent to carry this life-giving powder, but there is all the same. The apple blossom, for instance, is a perfect flower, containing both pistil and stamens, but when the germ is in season to receive the life-giving powder, the anthers waving in the breeze above are not ripe, have not bursted to shed the pollen, and it must be brought from a mature flower, and the honey-bee is the only agent.—*Prairie Farmer.*

A Southern California Apiary.

The engraving on the opposite page shows the famous Sespe apiary. It is located in Ventura County, on the bank of the Sespe River, from which it takes its name. In 1876 R. Wilkin, of Cadiz, Ohio, became tired of trying to winter his bees in that cold climate, and moved his large apiary to California, locating it on this spot. This ground has been occupied by bees ever since, but the hives have been changed, and it is now owned by his son-in-law, J. F. McIntyre.

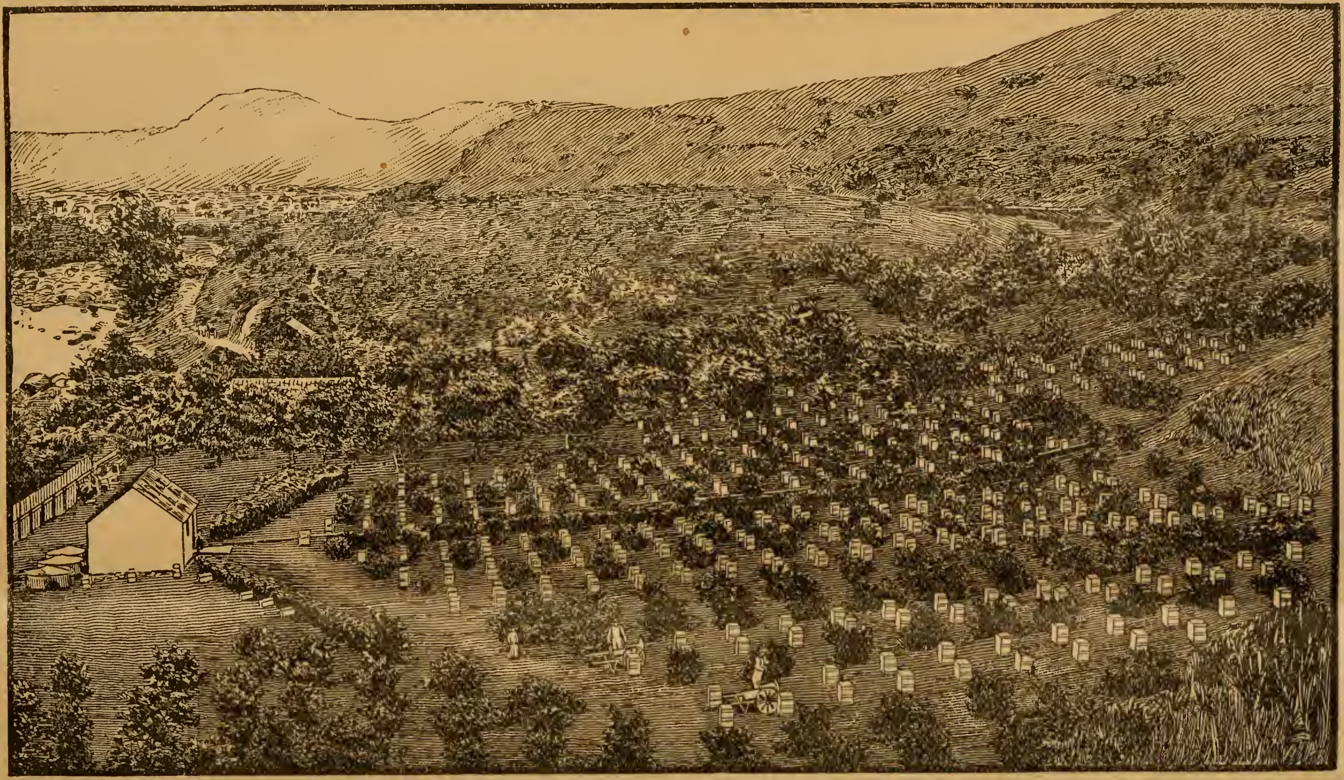
The grapevines in the foreground were planted soon after the apiary was located, and produced a heavy crop of grapes every year, with little injury, it is claimed, from the bees. The land slopes about 10 feet from the back of the apiary to the honey-house, which makes it easy to wheel the honey into the house. Two carts, shown in the foreground, are used to wheel in the honey. Each cart carries four "supers" full, or about 200 pounds at a load.

When extracting, one man fills one cart with honey in the apiary, while the other extracts the other cart-load in the honey-house. It takes from 20 to 30 minutes to fill a cart, and the man in the honey-house can easily extract one in the same time.

A 3-inch pipe runs from a reservoir down through the apiary, and connects with a Pelton water motor in the honey-house, which furnishes sufficient power to run a small circular saw or the honey-extractor.

The honey runs from the extractor into iron tanks, shown below the honey-house, which hold 8,000 pounds each, where it is allowed to stand for one or two weeks, and is then drawn off through a molasses gate into 60-pound cans for the market.

This apiary produced 27,000 pounds of honey last year, and 9,480 pounds this year. The hives are the Ventura County standard. They are really a 10-frame Langstroth without portico, and have a loose bottom-board. A zinc queen-excluder is used between the



SESPE APIARY, OWNED BY J. F. McINTYRE, AT FILLMORE, CALIF.—LOOKING WESTWARD.

super and brood-chamber, and a painted duck-cloth under the cover. The apiary contains at present 475 colonies in large hives, and 100 nucleus hives for fertilizing queens. The nucleus hives have been added since the picture was taken.

The orchard back of the apiary contains nearly every kind of fruit, but the oranges and lemons are most profitable. Above the orchard on the hillside is the Sespe Land and Water Company's flume, which carries water to the orange and lemon orchards in the valley below. The water is taken from the Sespe River, which shows a little over the honey-house. The hill above the flume is a foothill at the base of San Cayetano Mountain, on the north side of the Santa Clara Valley.

The mountains in the dim distance are a spur of the San Fernando range, which run down from Newhall on the south side of the Santa Clara Valley. This valley is about three miles wide at this point, the conjunction of the Sespe and Santa Clara rivers, and is good orange and lemon land for 10 miles above and below.

The Southern Pacific railroad runs down this valley from Newhall to Ventura. Fillmore is the town at this point; it has been built since the railroad came, about four years ago. Santa Paula is an older and much larger town; it is eight miles down the valley, is the center of the petroleum business in this county.

[The above description is taken from the *Pacific Rural Press*, and the engraving is reproduced from a photograph sent to us by Mr. McIntyre. Its companion picture, showing another view of this apiary, was given last week on page 561.—Ed.]

Report of the Season in Tennessee.

A. C. BABB.

The honey flow ceased in this section about July 1, owing to wet weather, which continued until Sept. 1. August was extremely wet; it rained nearly every day throughout the month.

About Sept. 10 bees began work on river weeds, which lasted until about Oct. 1, when stick weeds, or white top, came in bloom, and have continued since.

There were frosts on Oct. 15 and 16, and as it is too cold for bees to gather much honey now, the season is over for this year.

I did not get as much surplus honey this Fall as last, on account of the cold weather—it set in 10 days too soon. I extracted some fine honey a few days ago, which was gathered from white weed.

My bees have no honey-dew in their hives, having consumed it all during July and August, and when the Fall honey-flow came, they filled their combs with honey, and are in good condition for Winter.

The fruit crop caused great injury to bee-keepers this Fall. In this section there were immense numbers of bees killed by fruit dryers. Persons working with fruit would mash the bees, cut them in two with knives, and burn them up.

While in town one day, I saw a grocery clerk killing something in the windows, and crossing the street to see what it was, I found that bees flew in at the door, and then tried to pass out at the windows, and the clerk swept them down with the broom, threw water on them, then swept them into a pile and mashed them with his foot. I do not think such a proceeding is right.

Greenville, Tenn., Oct. 21, 1891.

Out-Door Wintering of Bees.

W. Z. HUTCHINSON.

If bees can enjoy frequent flights, out-of-doors is the place to winter them. If deprived of these flights a temperature of about 45° enables them to bear a much longer confinement than does a temperature below freezing. In the South frequent flights are assured; in the North no dependence can be placed upon the matter. Some Winters are "open," or there are January thaws, allowing the bees to enjoy cleansing flights, while other Winters hold them close prisoners for 4 or 5 months.

It is this element of uncertainty attending the wintering of bees in the open air that has driven so many bee-keepers to the adoption of cellar wintering. Still, there are some bee-keepers who, from some peculiarity of location, winter their bees in the open air with quite uniform success; others are compelled, for the present at least, to winter their bees out-of-doors; in short, a large proportion of the bees, even in the North, are wintered in the open air, and probably will be for a long time to come, and while my preference is for the cellar, I have no desire to ignore the out-door method.

PROTECTION AND WINTER FLIGHTS.

It does not seem as though the question of whether bees should be protected in the North, need receive any consideration whatever, yet it has been objected to on the grounds that the packing becomes damp ; that it deprives the bees of the warmth of the sun, and that they sometimes fail to fly in the Winter (because the outside warmth is so slow in reaching them) when bees in single-walled hives may be in full flight.

There is occasionally a still, mild day in Winter, upon which the sun shines out bright and strong for an hour or two, and bees in single-walled hives enjoy a real cleansing flight, while the momentary rise in temperature passes away ere it has penetrated the thick walls of a chaff hive.

On the other hand, there are days and weeks, and sometimes months, unbroken by these rises in temperature ; and the bees must depend for their existence upon the heat generated by themselves, and the more perfect the non-conductor by which they are surrounded, the less will be the loss of heat.

When bees are well protected, there is less necessity for flight than when the protection is slight. If the bee-keeper thinks, however, that bees in chaff hives ought to fly on a warm day, but they do not fly, he has only to remove the covering *over* the bees and allow them to fly from the tops of the hives.

For several Winters I left quite a number of colonies unprotected. I discontinued the practice only when thoroughly convinced that, in this locality, the losses were lessened by protection. In mild Winters the bees came through in pretty fair condition.

In severe Winters the bees in the outside spaces, or ranges of combs, died first ; the cluster became smaller ; the bees in more ranges died ; and by Spring all were dead, or the colony so reduced in numbers, and the survivors so lacking in vitality, as to be practically worthless.

VENTILATION.

I have never seen any ill effects from dampness, but I have always given abundant ventilation *above* the packing. When the warm air from the cluster passes up through the packing, and is met by the cold outer air, *some* condensation of moisture takes place. This moistens the surface of the packing slightly, but it is comparatively dry underneath. With a good, strong colony of bees, and ventilation above the packing, I have never know of trouble from moisture.

CHAFF HIVES.

In the giving of protection, chaff hives have the advantage of being always ready for Winter, and of doing away with the labor and untidiness of packing and unpacking, but they are expensive and cumbersome. It is some work to pack bees in the Fall and unpack them in the Spring, but light, single-walled, readily-movable hives during the working season are managed with enough less labor to more than compensate for that of packing and unpacking.

Then there is another point. The work of packing and unpacking comes when there is comparative leisure, while the extra work caused by having great, unwieldy hives, is brought in at a time when the bee-keeper is working on the "keen jump."

CORK DUST FOR PACKING.

For packing material, I have used wheat chaff, forest leaves, planer shavings and dry sawdust. I have never used cork dust, but it is probably the best packing material. Its non-conductivity is nearly twice that of chaff, while it never becomes damp. The only objection is that it is not readily obtainable, and usually costs something, while the other substances mentioned cost nothing. What they lack in non-conductivity is easily made up in quantity, and this brings up the point of the proper thickness for the packing.

I have often thrust my hand into the packing surrounding a populous colony of bees, and found the warmth perceptible at a distance of four inches from the side, and six inches from the top. This would seem to indicate the thickness when chaff or sawdust is used. I presume that packing has often been condemned when it was not more than half hand—that is, when not enough material was used. I do not appreciate the argument of those who advocate *thin* packing. I do not believe that the benefit of the heat from the sun can compensate for the lack of protection during the months of extreme cold.

DEAD-AIR SPACES.

Hollow walls, with no packing, have their advocates ; and it has been asked if these dead-air spaces were not equally as good non-conductors of heat as those filled with chaff. They are not. In the first place, the air is not "dead," it is constantly moving. The air next to the inside wall becomes warm and rises ;

that next the outer wall cools and settles; thus there is a constant circulation that robs the inner wall of its heat.

BOXES FOR CHAFF PACKING.

If chaff hives are not used, how shall the packing be kept in place? I know of nothing better than boxes made of cheap, thin lumber. If there is lack of room for storing them in Summer, they can be so made as to be easily "knocked down" and stacked up when not in use.

Of course, bees can be packed more cheaply by setting the hives in long rows, building a long box about them, and filling it with the material used for packing. With this method the packing must be postponed until there is little danger of the bees flying again—until they have forgotten their old locations; else some bees will be lost, or some colonies get more than their share of bees.

When the bees have a "cleansing flight" in Winter, there is also a likelihood of bees returning to the wrong hives. Then when the bees are unpacked in the Spring, and moved to their proper places, there is more confusion and mixing; but I do not look upon this as so very serious a matter. At this time of year, other things being equal, a bee is worth just about as much in one hive as in another. If there is any difference in the strength of the colonies, the weaker ones might be left nearest to where the bees were unpacked.

EARLY PACKING.

Speaking of being compelled to wait about packing the bees until they were not likely to fly again until some time in the Winter, reminds me that advantages have been claimed for *early* packing; that the bees in single-walled hives only wear themselves out with frequent flights that are to no purpose, while those that are packed are not called out by every passing ray of sunshine; that the early-packed bees sooner get themselves settled down for their Winter's nap, and are in better condition when Winter comes.

It is possible that there is something in this, but there were two or three years in which I tried feeding a colony or two as early as the first of September; and I continued to pack a colony every two or three days until the forepart of November, and I was unable to discern any advantage in very early packing. If the bees are protected before freezing weather comes, I believe that is early enough.

SPACE BELOW THE COMBS.

There is one other point that ought not to be neglected in preparing the bees for Winter, whether indoors or out, and that is the leaving a space below the combs.

When wintered out-of-doors, there ought to be a rim two inches high placed under each hive. This allows the dead bees to drop away from the combs to a place where they will dry up instead of molding between the combs.

Then if there is an entrance above the rim there will be no possibility of the entrance becoming clogged. This space under the combs seems to be a wonderful aid in bringing the bees through in fine condition, and I am not certain *why*.

Weak colonies can seldom be successfully wintered out-of-doors. They cannot generate sufficient heat. In the cellar, where the temperature seldom goes below 40°, quite weak colonies can be successfully wintered.

SUMMARY.

As I understand it, this whole matter of outdoor wintering of bees might be summed up in a few words: Populous colonies, plenty of *good* food, and *thorough* protection. Simple, isn't it? Yet there is a world of meaning wrapped up in these few words.—*Country Gentleman.*

Securing the Necessary Rainfall.

H. L. PENFIELD.

I read with considerable interest the editorial on the above subject, on page 278. Mr. E. Sandford, on page 518, calls attention to the experiments in Texas, and seems to be impatient about the result.

I would say that it takes time to arrange what has already been observed, and proceed with some system in the matter. The object, no doubt, is to get a result that will be practical at minimum cost.

Although the last experiment at Camp Powers, Texas, looks favorable, yet it will be some time before the people can depend on following up what has been outlined by the Government. The balloons will, I think, cut an important figure in several advantageous ways. The oscillations of the balloons will show when the disturbance in the upper air commence, and, I think, electric communication with the ballooons thus employed will determine several important points, and perhaps cheapen satisfactory results......

In regard to what Mr. Sandford says about the numerous lakes being of no apparent avail in drouth, I would say that evaporation is going on under predisposing causes from these bodies of water, and that the air "holds it in solution," as the chemist would say, and that, as the Indian said, "To be sure of the rain, the disturbance of thunder and lightning would bring it down."

So we see that some things can be proved, even by a "poor Indian," and it will also take time and money to work out the problem that, as our worthy editor says, is now absorbing universal attention.

Hunnewell, Mo.

Southern California Convention.

The annual convention of the Southern California Bee-Keepers' Association was held at Los Angeles, Calif., on Tuesday, Oct. 21, 1891; President C. N. Wilson in the chair.

The following report is condensed from the Los Angeles *Herald:*

Among the delegates present when the convention was called to order were:

C. W. Abbott, Pasadena; C. W. Newall, Murietta; W. T. Kirk, Pasadena; C. Schiliesnager, Pasadena; G. B. Woodberry, Verdugo; L. T. Rowley, Sunland; E. E. Shattuck, Garvanza; A. B. Mullen, Acton; John J. Johnson, Sunland; John Holser, Piru City; J. J. Cole, Tropico; L. H. Bannister, Pasadena; Henry Otto, San Jacinto; John G. Corey, Thompson; William Stevenson, Pasadena; J. F. McIntyre, Fillmore; Jeff Williams, Tustin; W. T. Richardson, Santa Paula; N. Cochens, Del Sur; H. H. Hillard, Pasadena; N. Barnet, Whittier; B. S. K. Bennett, South Los Angeles; J. H. Hutchings, Tehunga.

About the first thing done was to take a recess of half an hour so as to allow candidates for membership to pay their dollars, and sign the Constitution. The result was gratifying, for 38 new members were added, representing a total of 5,525 colonies of bees.

A bone of contention was thrown into the convention by J. F. McIntyre, who moved an amendment of the Constitution, to the end that the organization should be extended or expanded into a State association, and that its name be changed to the California Bee-Keepers' Association.

J. G. Corey said that the proposition was in the nature of a surprise, because due notice of the proposed change had not been given.

He was answered by L. T. Rowley and W. H. Densmore, the latter, who is Secretary of the Mountain Bee-Keepers' Association, holding that all technicalities should be overlooked in order to form a State society able by its influence to protect the industry against marauding adulterators, dealing in glucose and paraffine, instead of honey and beeswax.

Mr. McIntyre said the bee-keepers wanted to get a share of the $300,000 voted by the Legislature to the World's Fair exhibit, to be used to further the bee-keepers' exhibit, and to do this they would have to be organized into a State organization instead of a county organization. The lower counties of the State are the bee counties, and if the northern counties came in, it would not change the complexion of the association.

President Wilson replied to the arguments of those favoring the amendment in an earnest manner, planting himself firmly as opposed to the proposition. He declared the association would never be able to get a dollar of the $300,000, as it has been apportioned out, and any possibility of getting any of it would require more money to work the Legislature than would ever be gotten out of it by the bee-keepers.

The association at 12:30 o'clock took a recess to 1:30 p.m.

At the afternoon session the animated discussion of the amendment continued with vigor.

It took a two-thirds vote to pass the amendment, and when the question was finally called, there were 39 ayes and 21 noes, and the proposition was therefore lost. One single vote added to the ayes at the expense of the noes, would have created the State organization. The progressive and liberal element had an opportunity a short time afterward, however, to retaliate. The election of officers was the next in order, and resulted as follows:

President, C. W. Abbott, of Pasadena; Secretary, G. W. Brodbeck, of Los Angeles; Treasurer, R. Wilkin, of Ventura; Vice-President for Los Angeles County, L. T. Rowley; Vice-President for San Diego, W. Starr; Vice-President for San Bernardino, Mrs. Bonfoy; Vice-President for Ventura, J. F. McIntyre; Vice-President for Orange, J. W. King.

EXECUTIVE BOARD—C. W. Abbott, R. Wilkin, H. H. Hillier, G. W. Brodbeck, and L. T. Rowley.

Since the foregoing was in type, we have received from the Secretary the following report of the second day's session:

The above proceedings consumed the greater portion of the day, so that the session was prolonged until the ensuing day, when the following programme was presented:

A Rambling Bee-Keeper—By J. H. Martin ("The Rambler").

Apiarian Appliances—By J. F. McIntyre.

The Boston Honey Market—By W. T. Richardson.

All of these topics were very interesting, and of benefit to those present.

The President elect, and in fact all of the officers, are men tried and true. The crucial year of any association is the first, and now that this one has passed that stage, with an additional membership of 40, there is much of encouragement.

To aid us in the future, we would request every bee-keeper in the State to send his address and any statistics pertaining to the honey industry of their section. **Geo. W. Brodbeck**, *Sec.*

223 S. Spring St., Los Angeles, Calif.

Convention Notices.

☞ The Michigan State Bee-Keepers' Association will meet in Grand Rapids, Mich., on Thursday, Dec. 31, 1891, and Friday, Jan. 1, 1892, **Geo. E. Hilton**, Sec., Fremont, Mich.

☞ The Connecticut Bee-Keepers' Association will meet in the Capitol at Hartford, on Nov. 11, at 10:30 a.m. All are cordially invited to attend. There will be readings and discussions, so come prepared to take part.

Mrs. W. E. Riley, Sec., Waterbury, Conn.

☞ The Northwestern Bee-Keepers' Society will hold its annual convention at the Commercial Hotel, corner of Lake and Dearborn Streets, in Chicago, Ills., on Thursday and Friday, Nov. 19 and 20, at 9 a.m. Arrangements have been made with the Hotel for back room, one bed, two persons, $1.75 per day, each; front room, $2.00 per day for each person. This date occurs during the Exposition, when excursion rates on the railroads will be one fare for the round-trip.

W. Z. Hutchinson, Sec., Flint, Mich.

The Executive Committee have fixed the date of the next session of the North American Bee-Keepers Association, Dec. 8 to 11, at Albany. There will be an informal meeting on the evening of Tuesday, Dec. 8, for getting acquainted, etc. The real work of the convention will commence Wednesday morning, and extend through two full days, ending Friday morning, giving distant delegates time to get home before Sunday. We want all to get there if possible on Tuesday. If they have a few hours of daylight it will give an opportunity to look around the city, view the capitol building, etc. Reduced rates have already been secured in all trunk-line territory, and the same is expected over other railroads. The programme is now under way, and other arrangements are nearly completed. If you have decided to take a vacation that will, we trust, be profitable, don't fail to attend this convention.

P. H. Elwood, Pres., Starkville, N. Y.
C. P. Dadant, Sec., Hamilton, Ills.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Nov. 19, 20.—Northwestern, at Chicago, Ills.
W. Z. Hutchinson, Sec., Flint, Mich.
Dec. 31.—Michigan State, at Grand Rapids.
Geo. E. Hilton, Sec., Fremont, Mich.
Dec. 8, 11.—North American, at Albany, N. Y.
C. P. Dadant, Sec., Hamilton, Ills.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

North American Bee-Keepers' Association

President—P. H. Elwood....Starkville, N. Y
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y and Manager—T. G. Newman, Chicago.

Bee and Honey Gossip.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Short Crop of Honey.

The honey crop has been pretty short here this season. White clover never was so plenty before, but it did not yield any honey to speak of in this section. Golden-rod was a failure; that was never before known to fail here since I have kept bees. **L. J. Waldo.**

Merrow, Conn., Oct. 26, 1891.

Discouraging.

The past was a very poor season for bees and honey in this part of the country, making the fourth season in succession that bee-keeping has been a losing business. Many are becoming discouraged, and some are utterly disgusted with the business. Bees can be bought for about the cost of the hives.

S. S. Bults.

Wyalusing, Pa., Oct. 26, 1891.

Necessary Rainfall for Apiarists.

I would say that you may mention at the next prominent convention of bee-keepers, my interest in the subject of the Government experiments of producing rain, and that if thought advisable I will pursue the matter for the interest of the bee-keepers, and keep them posted, and be present at the point of further experiments, if a reasonable allowance is made for my expenses, and to keep my family while I am absent. I can make sketches with pen or brush that can be made into plates cheaply, and I think further the object by suggestions, as I have already done to Gen. Dyrenforth. HENRY L. PENFIELD.

Hunnewell, Mo.

Black Diarrhea—Bee-Disease.

L. B. Smith describes a bee-disease on page 496 of the AMERICAN BEE JOURNAL. I think several of us have had the same trouble in our apiaries. I think his bees have the black diarrhea. I had 3 colonies that had it last Spring, and I cured one of them with brine; the other two got over it, by putting salt in the place where they got water. My neighbor had 2 colonies which caught the same disease in August. One of them lost half of its bees before I found they had it. I gave them salt water, poured it on one of the combs, and the work was done. He cured the other in the same way. I described it on page 149 of the AMERICAN BEE JOURNAL for July 30, 1891. This disease works differently; in some seasons, in early Spring, the bees will be more swollen than when they fly regularly. But as long as they have this disease they will spot the hive, as they do the snow in Winter, when they fly, sometimes more than others. J. H. BERRY.

Gale's Creek, Oreg.

My Report for 1891.

My 8 colonies of bees came through the Winter in fine condition, and the weather during fruit bloom being all that could be desired, they filled their hives quite well, and made prepartions to swarm. Then it commenced to rain. The weather continued cool and cloudy until after clover bloom was about over, and the bees throughout this section of the country barely gained a livelihood, with little or no swarming. I only had one swarm issue during the whole season. The rain, however, put the Fall honey plants in a good condition, and I secured a fair crop of Fall honey from polygonum, beggar-ticks, and Spanish-needles. The asters did not yield any honey, owing, I suppose, to the drouth, which has existed here for sometime. My crop, this year, consists of 600 finished sections, for which I get 17 and 18 cents. I had about 140 sections which were pretty well filled, but are not all capped over. I cut the honey out of these and sell it for 15 cents per pound, besides about 150 pounds which I took in brood-frames from a colony that I call my pets. This is a very large colony of bees, in a hive 2 feet long, 14 inches wide, and 2 feet deep, when the upper story is on. The bees are pure Italians, very gentle, and finely marked. CHAS. W. WILLARD.

Carbondale, Kans., Oct. 26, 1891.

Bee-Keeping in Georgia.

Bees have done fairly well this year. For about three weeks in May, during the poplar bloom, they stored honey rapidly, and of extra fine quality. After that, they managed to hold their own until the middle of September, when the Fall flowers commenced to open. For the past two weeks they have been very busy on the asters, and now they are bringing in aster honey abundantly, which can be told by a peculiar sour smell about the hives, night and morning. J. P. H. BROWN.

Augusta, Ga., Oct. 22, 1891.

Fair Crop of Comb-Honey.

Last Spring I had 43 colonies. Some were very weak, and did not gather any honey, while others were strong, and gathered some honey. I increased them to 70 colonies, and got 1,000 pounds of comb-honey. We did not get much white clover honey this year, on account of the drouth. I expect to winter the bees on the summer stands. Many bees have died in this part of the State; some starved, while some had foul-brood, which is fearfully prevalent in this part of the State, and I fear it will be worse, if not checked soon.

ELIAS ROBINSON.

Carmi, Ills., Oct. 29, 1891.

Bees Without Stores.

Last Spring I had 16 colonies of bees, which I bought of several of the neighbors, and during the latter part of the Summer the moth destroyed one, and the remaining 15 are only just living. I weighed them all when I brought them home, and on weighing one to-day, I find the weight much less than then, and only 4 pounds heavier than the hives were before any bees were put in them. I am quite sure that two-thirds of the bees in this locality will starve, if they are not fed. There was quite a good honey-flow during the latter part of May and the first of June, but that was exhausted during the severe drouth. I made a short visit to High Hill, Mo., on July 3, to see Messrs. Nebel & Son. I purchased 3 Italian queens and 1 pound of bees, brought them home, and introduced them successfully. They have attracted considerable attention, as there are no Italian bees in this locality.

Dolson, Ills. E. F. CLAPP.

Grubb's Way of Fastening Foundation

The illustration on page 520, of the Grubb frame, does not show the best way to put the foundation in. The better way is to slip the sheet of foundation into the frame as it belongs, then put the wedge-shaped strip back where it came from, and crowd it down until it presses the foundation, and thus holds it in place. Then nail the strip in. It is not necessary to first fasten the strip to the foundation. H. N. JONES.

Clay Centre, Nebr.

[The illustration in question is an exact copy of the one on Mr. Grubb's patent, and was not intended to show "the best way to fasten comb-foundation to frames," but to show that his "claim" was on an old device, in use for years before he claimed it as original.—ED.]

Wavelets of News.

Honey-Dew, Winter Stores, Etc.

I have a few sections of it, and hardly know what to do with the stuff. It is not safe to winter bees on, and it is not good to eat. At least some people do not like it, although some do, just as some prefer buckwheat to any other honey. I think I prefer to keep it, and use it for Spring feeding. Bees use a lot of stores for rearing brood in the Spring, and can safely use almost anything when they can fly every day. But it will not do to feed enough of it, or late enough, so that there is any danger of getting some of it stored in surplus.

I have weighed all my bees this Fall, instead of "hefting" them, or guessing at their stores by inspection. Weighing will not tell just how much honey is in the hive, but it will tell more nearly than guessing. Count on each hive about 10 pounds heavier than necessary, and then you will find some not a bit too heavy, because there may be 10 pounds extra heavy combs and bee-bread. I try to have hives with cover, bottom-board, bees and stores, all weigh at least 50 pounds. Your hives may be larger or smaller, so heavier or lighter.—DR. C. C. MILLER, in the *National Stockman.*

Golden-Rod in California.

In a journey of some fifty miles through the mountainous region of the San Fernando and adjacent country, made during September, we observed some splendid specimens of golden-rod, and wherever it was in bloom it was almost bending under the multitude of bees at work upon it. It has been said that bees do not frequent the plant for honey, and some say that the golden-rod does not grow in California, but many of the more sheltered canyons, especially those supplied with constantly running water, furnish immense quantities, and gorgeous growths of the National flower. Where it has once established itself, the plant will flourish, even in very dry years, and gives considerable bloom that yields good nectar, though honey gathered from it is not as light as that produced from the sages.—*Rural Californian.*

The "Point of Confidence."

Most persons who undertake bee-keeping enter the work with some misgivings. While they do not exactly fear the bees, yet there is at first an involuntary hanging back, a reluctance to handle bees more than is absolutely necessary.

Beginners should wear not only a veil, but also gloves; many novices seeing old bee-keepers handle them with bare hands try to imitate them—like to appear professional—to go among the bees with a reckless air.

Some of the most sucessful bee-keepers have said that before the first year had passed they had almost decided that there was something about them that antagonized the bees, and that they could do nothing with them.

An acquaintance declared, in the fall of the first year, "I've had enough of bees. They will not accept me. It is useless to tell me that bees do not sting. They do nothing else with me." But he decided to struggle through another year; for, in spite of many stings, he had a good crop of honey. Before the second year closed, he remarked that bees were as harmless as flies. What had brought about this change? He had reached the "confidence point," and the bees knew it, and recognized him as master. He had become so familiar with the work, so much interested in it, that he forgot self, forgot to jump, to jerk his hand away when a bee started to explore the back of his hand.

Therefore, let every beginner faint not, but keep up courage and keep at the bees. Without knowing when the change takes place, he may reach the stage of perfect confidence, and will make light of the stings implanted earlier in his own faltering hand.—*American Agriculturist.*

Music to Arrest Swarms.

Boys can now find new use for their drums, mouth-organs, Jew's-harps, etc., and make more agreeable music than the old-time frying-pan and key. We relate the following which occurred in the neighboring city of Pekin: The Salvation Army was parading up Court Street on Sunday afternoon, beating their drums, etc., as a swarm of bees were flying down the street. The great noise made caused the bees to cluster on the window-casing, on the front of a grocery store. A man was standing under the swarm, when half of them clustered on his right hand. This greatly surprised him, but he laughed and handled them, when passers-by kept their distance from him, fearful of being stung. It attracted considerable attention, but the bees did not sting him. Some one captured the swarm in a box late in the afternoon.—MRS. L. HARRISON, in the *Prairie Farmer.*

Robbing in the Fall.

Robbing always occurs at the close of the honey season. Take precautions in this matter, and do not leave honey carelessly lying around. Do not have hives open, or cracks and crevices in the surplus stories; the bees always find such, and nothing of the kind escapes their notice.

Robbing is often started by the apiarist's removal of surplus honey about the close of the season. This should not be done at any time during the day, but late in the evening, or what is better, make a bee "tent" from gauze or fly netting, and place this over the hive before opening it; thus all will be safe. This tent is an indispensable article, and one or more should be in every apiary. When a hive of bees is being robbed, this tent should be set over it. There is nothing better to prevent robbing.—*Exchange.*

Uniting Weak Colonies.

If on examination of your bees you find some colonies that are weak and not strong enough to go through the Winter in safety, something must be done. Unite them. Now is the time. The way to "do it" is this: Between the 2 colonies to be united set an empty hive, spread in front of it a sheet or a large paper, puff a few whiffs of smoke into one of the hives to be united, remove the top, lift out the frames, one at a time, and shake the bees on the sheet, and place the empty combs in the middle hive. Now treat the other hive in the same manner, and if you are careful not to break any honey, you will have no further trouble.—F. H. PETTS, in *Farm, Field and Stockman.*

Just What You Need!

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the BEE JOURNAL (with $1.00 to pay for the same), or 2 subscribers to the HOME JOURNAL may be sent instead of one for the BEE JOURNAL.

The Union Scale you sent me was received some time since, and I am well pleased with it. I asked the price of such a scale in our hardware store, and was told that a single beam to weigh 240 pounds would cost $4.00. For such I paid you only $3.00, saving me a dollar.—Jacob Moore, Ionia, Mich.

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On **30** lines, or more, 4 times, 20%; 8 times, 25%; 13 times, 30%; 26 times, 50%; 52 times, 60%.
On larger Advertisements, discounts will be stated, upon application.

Advertisements intended for next week must reach this office by Saturday of this week.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to pay for another year.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. It costs:

For 50 colonies (120 pages) $1 00
" 100 colonies (220 pages) 1 25
" 200 colonies (420 pages) 1 50

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The 7 above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75
Orange Judd Farmer	2 00	1 75
Farm, Field and Stockman	2 00	1 75
Prairie Farmer	2 00	1 75
Illustrated Home Journal	1 50	1 35
American Garden	2 50	2 00
Rural New Yorker	2 50	2 00
Nebraska Bee-Keeper	1 50	1 35

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

◆

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

◆

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

◆

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

YOU NEED an Apiary Register, and should keep it posted up, so as to be able to know all about any colony of bees in your yard at a moment's notice. It devotes two pages to every colony. You can get one large enough for 50 colonies for a dollar, bound in full leather and postage paid. Send for one before you forget it, and put it to a good use. Let it contain all that you will want to know about your bees—including a cash account. We will send you one large enough for 100 colonies for $1.25; or for 200 colonies for $1.50. *Order one now.*

The Bee-Keepers' Directory, by Henry Alley, Wenham, Mass. It contains his method for rearing queens in full colonies, while a fertile queen has possession of the combs. Price by mail, 50 cents.

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00. For sale at this office.

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

Binders made especially for the BEE JOURNAL for 1891 are now ready for delivery, at 50 cents each, including postage. Be sure to use a Binder to keep your numbers of 1890 for reference. Binders for 1890 only cost 60 cents, and it will pay you to use them, if you do not get the volumes otherwise bound.

The Honey-Bee; Its Natural History, Anatomy, and Physiology. By T. W. Cowan, editor of the *British Bee Journal*, illustrated with 72 figures and 136 illustrations. $1.00. For sale at this office.

Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul-brood, can be procured at this office at 25 cents per ounce, by express.

Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

Red Labels are quite attractive for Pails which hold from 1 to 10 lbs. of honey. Price, $1.00 per hundred, with name and address printed. Sample free.

Money in Cabbage and Celery.—"Blood will tell." Good crops cannot be grown with poor strains of seed.

For 16 years Tillinghast's Puget Sound Cabbage, Cauliflower and Celery Seeds have been gaining in popularity. The most extensive growers all over the Union now consider them the best in the world. A catalogue, giving full particulars regarding them, will be sent free to any one interested. When writing for it, enclose 20 cents in silver or postage stamps, and we will also send "HOW TO GROW CABBAGE AND CELERY," a book worth its weight in gold to any grower who has never read it. Address

ISAAC F. TILLINGHAST,
18A16t La Plume, Pa.

REMOVED.

We have leased more commodious quarters, and hereafter may be found at

199, 201, 203 EAST RANDOLPH ST.,
[THIRD FLOOR]

Where we shall be pleased to see any friends who may call upon us.

THOMAS G. NEWMAN & SON,
199, 201, 203 East Randolph St., CHICAGO, ILLS.

HONEY AND BEESWAX MARKET.

NEW YORK, Oct. 30.—Demand is limited, and supply sufficient. We quote: Comb—Fancy white, 1-lb., 14@15c; 2-lb., 12@13c; off grades, 1-lb., 12@13c; 2-lb., 11@12c; buckwheat, 1-lb., 10@11c; 2-lb., 9c. Extracted—Basswood, white clover and California, 6¾@7c; orange bloom, 7@7½c; Southern, 60@70c ℔ gal., as to quality. Beeswax, steady, 25@27c.

HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, Oct. 31.—The demand is good, and supply fair. We quote: White comb, 15@16c; dark, 10@12c. Extracted, white, 7@7½c; dark, 5@6c. Beeswax, is in light supply, and demand good, at 23@26c.

CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Oct. 31.—Demand is only fair, with good supply. We quote: Choice comb, 14@16c. Extracted, 5@8c. Beeswax is in fair demand and good supply, at 23@25c for good to choice yellow.

C. F. MUTH & SON,
Cor. Freeman & Central Aves.

NEW YORK, Oct. 30.—Demand for honey is increasing, but is exceeded by supply. We quote: Fancy 1-lb. comb, 15@16c; 2-℔., 14c; fair, 1℔., 13@14c; 2-℔., 13c. Extracted—California, 7c; clover and basswood, 7@7½c. Beeswax—in fair demand, with adequate supply, at 25@27c.

CHAS. ISRAEL & BROS., 110 Hudson St.

CHICAGO, Oct. 31.—The demand is good for fancy white comb-honey, and all such is selling at 16c; other grades, 14@15c. Extracted, 7@8c. Beeswax, quick sale, at 26@27c.

S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Oct. 31.—Demand for honey good, with light supply. We quote: Comb—1-lb. white, 16c; dark, 12c; 2 lb. white, 15c; dark, 10c. Extracted—white, 7@7½c; dark, 5@6c. Beeswax, supply and demand light, at 25@27c.

HAMBLIN & BEARSS, 514 Walnut St.

DETROIT, Oct. 31.—The demand for comb-honey is fair and supply small. We quote: Comb, 12@13c; extracted, 7@8c. Beeswax in good supply, and light demand, at 25@26c.

M. H. HUNT, Bell Branch, Mich.

CHICAGO, Oct. 31.—The demand is slow for 1-℔. comb-honey, with good supply. We quote: Choice white comb, 14@16c. Extracted, 6@8c. Beeswax, in light supply, and demand slow, at 27c. J. A. LAMON, 44-46 S. Water St.

ALBANY, N. Y., Oct. 30.—Demand improving; supply moderate. We quote: White comb, 12@17c. Extracted, 6@8c. Beeswax, scarce and in good demand at 26@28c.

H. R. WRIGHT, 326-328 Broadway.

NEW YORK, Oct. 30.—Demand good, with fair supply. We quote: No. 1 comb, 16c; No. 2, 13@14c. Extracted—California, 7@7¼c; basswood, 7¼@8c; Southern, 65@70c per gal. Beeswax, supply and demand fair, 26½@27c.

F. G. STROHMEYER & CO., 122 Water St.

SAN FRANCISCO, Oct. 28.—Demand good, supply small. We quote: Comb, 1-lb., 10@13c. Extracted, 5¾@6c. Beeswax, in light supply and good demand, at 24@25c.

SCHACHT, LEMCKE & STEINER,
16 Drumm Street.

CHICAGO, Oct. 31.—Demand is now good, supply is not heavy. We quote: Comb, best grades, 15@16c. Extracted, 6@8c. Beeswax, 26@27c.

R. A. BURNETT, 161 S. Water St.

BOSTON, Oct. 30.—Demand is good, supply ample. We quote: 1-℔. fancy white comb, 15@16c; extracted, 7@9c. Beeswax, none in market.

BLAKE & RIPLEY, 57 Chatham St.

MILWAUKEE, Oct. 31.—Demand not very brisk; supply good, and of better quality. We quote: Comb—choice, 1-lb., 15@16c; fair, 13@14c; dark, 10@12c. Extracted—white, in barrels or kegs, 7@7½c; dark, 6@6½c. Beeswax, 25@28c.

A. V. BISHOP, 142 W. Water St.

NEW YORK, Oct. 30.—Demand active, and supply increasing by large arrivals. We quote: Fancy 1-lb. comb, 14@17c, depending on quality; 2-℔. sections, 2c less. Extracted—White clover and basswood, 6@8c, and supply not equal to the demand. Beeswax—the supply is not equal to the demand, which is brisk, at 26@29c, as to quality.

F. I. SAGE & SON, 183 Reade St.

We Club the American Bee Journal and the Illustrated Home Journal, one year for $1.35. Both of these and Gleanings in Bee Culture, for one year, for $2.15.

Very Punctual.—I was surprised to receive the feeder as soon as I did. I like it very well. I receive mail matter in a shorter time from you than from Carlisle, O., only eight miles from here.

JOHN H. ROHRER.
Tippecanoe City, O., July 16, 1891.

☞ The Union or Family Scale has been received, and I am much pleased with it. W. H. KIMBALL.
Davenport, Iowa.

☞ The sewing machine I got of you still gives excellent satisfaction—W. J PATTERSON, Sullivan, Ills.

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line,** for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

WANTED—TO BUY—10,000 pounds choice comb-honey. Address B. WALKER, Capac, Mich., or Glen Haven, Wis. 18Atf

FREE Send for a free sample copy of the ILLUSTRATED HOME JOURNAL—the cheapest FIFTY-CENT Family Monthly in America. Liberal Premium offers.

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201 Randolph St. CHICAGO, ILL.

HERMAN F. MOORE,
ATTORNEY-AT-LAW.
Room 514 Chamber of Commerce Building,
CHICAGO, ILL.

ALL BUSINESS Promptly and Carefully transacted. Information on any subject of interest, including purchasing. Refers to the Editor of this paper. 18A-11Mtf

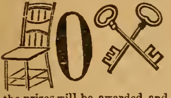
Mention the American Bee Journal.

$300 CASH!
For Solving this Rebus.
It is the name of a Tribe of Indians.
ALL HAVE A CHANCE TO GUESS.

We will give $100 for the first correct answer received; $50 for second; $25 for the third; $10 each for the next five; and $5 each for the next fifteen

Each Reply, to be eligible to competition, must be accompanied by 50 cents for a year's subscription, or 30 cents for 6 months, to the

Illustrated Home Journal,
Acknowledged to be the best 50 cent monthly in America. Devoted to the Home, Fashion, Music, Stories and Decorative Art.



Remit with answer before Jan. 1, 1892, when the prizes will be awarded and names published. NEWMAN & SON, 203 Randolph St., CHICAGO, ILL.

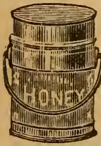
F. I. SAGE & SON,
COMMISSION MERCHANTS,
183 Reade Street, New York.

RECEIVERS of all kinds of COUNTRY PRODUCE, including Game, Live and Dressed Poultry, Dressed Hogs and Calves. Specialties—Berries, Grapes, Apples, Honey, Onions and Potatoes. Stencils furnished. Correspondence and consignments solicited. Reference: Dun's Commercial Reports, to be found at any bank. 12A26t

Mention the American Bee Journal.

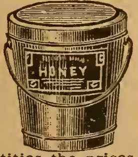
Tin Pails for Honey.

THESE Pails have full covers, and are excellent for selling Honey in the Home Market; and after the Honey granulates in them, it can be shipped anywhere with perfect safety. All sizes have a bail, or handle, and when empty are useful in every household.



The engraving shows STRAIGHT TIN PAILS, of which there are 3 sizes, holding respectively 3, 5 and 10 lbs. of Honey. Assorted Samples of the 3 sizes will be sent by express for 40 cts. In quantities, the prices are:

	Per doz.	Per 100
Gallon, . . holds 10 lbs . . .	$1.80	$12.00
½-Gallon, holds 5 lbs. . . .	1.50 . .	9.00
Quart, holds 3 lbs	1.20 . . .	7.00



The second engraving represents THE TAPERING TIN PAILS—made heavier and stronger than those with straight sides. The covers are deeper, and the top-edge of the Pail is doubled over, making it smooth and convenient to handle. Of the Tapering Pails there are five sizes, viz: 1-lb., 4-lb., 7-lb., 13-lb., and 25-lb. Assorted Samples of these will be shipped by express for 75 cents. In quantities, the prices are as follows:

To hold	1-lb.	4-lbs.	7-lbs.	13-lbs.	25-lbs.
Per dozen,	$ .75	$1.25	$ 1.50	$ 2.00	$ 3.25
Per 100,	5.00	8.00	10.00	14.50	23.00

THOMAS G. NEWMAN & SON,
199, 201, 203 East Randolph St., CHICAGO, ILLS.

Deutsche Buecher,
Ueber Bienenzucht.

Bienen Kultur, oder erfolgreiche Behandlung der Bienen, von Thos. G. Newman. Dieſes Pamphlet enthält Belehrungen über folgende Gegenſtände —Oertlichkeit des Bienenſtandes—Honig pflanzen—Erziehung der Königin —Füttern — Schwärmen — Ableger—Verſetzen—Italieniſiren—Zuſetzer von Königinnen—Ausziehen—Bienen behandeln und beruhigen; weiter enthält es ein Kapitel, worin die neueſte Methode für die Herrichtung des Honigs für den Handel beſchrieben iſt. Preis 40 Cents.

Honig als Nahrung und Medizin—von Thomas G. Newman. Dieſes enthält eine klare darſtellung über Bienen und Honig des Alterthums; die Beſchaffenheit, Qualität, Quellen und Zubereitung des Honigs für den Handel; Honig als Nahrungsmittel, angebend wie man Honigkuchen, Formküchelchen, Puddings, Schaumkonfect, Weine, u.ſ.w zubereiten kann; ferner Honig als Medizin mit vielen Rezepten. Es iſt für den Conſumenten beſtimmt, und ſollte vieltauſendfältig über das ganze Land verbreitet werden. Preis 6 Cents.

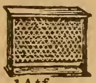
Das Pferd und ſeine Krankheiten—Von B. J. Kendall, M. D., enthaltend ein alphabetiſch geordnetes Verzeichniſs der verſchiedenen Pferdekrankheiten, ſammt den Urſachen, Symptomen und der richtigen Behandlung derſelben; ferner, eine Sammlung werthvoller Rezepte. Preis 25 Cents.

THOMAS G. NEWMAN & SON,
199, 201, 203 East Randolph St., CHICAGO, ILLS.

Send 50 Cents For my Book, entitled—"A Year Among the Bees," 114 pages, cloth bound. Address

DR. C. C. MILLER,
20Atf MARENGO, ILL.

PATENT WIRED COMB FOUNDATION
HAS NO SAG IN BROOD FRAMES.
THIN FLAT BOTTOM FOUNDATION
Has no Fish-bone in Surplus Honey.



Being the cleanest is usually worked the quickest of any Foundation made.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Montgomery Co., N. Y.
1Atf

Mention the American Bee Journal.

ONE COLONY Saved from Death the Coming Winter Would Repay the cost of a copy of "ADVANCED BEE CULTURE" ten Times Over. In 5 of its 32 Chapters may be Found the Best That is Known upon Wintering Bees. It costs 50 cents but its Perusal may Make you $50 Richer next Spring. The "REVIEW" and this Book for $1.25. If not Acquainted with the 'REVIEW," send for Samples. W. Z. HUTCHINSON, Flint, Michigan.

9Dtf *Mention the American Bee Journal.*

—THE—

Commercial Hotel,

CORNER OF

DEARBORN AND LAKE STS.,

CHICAGO, ILLS.

HEADQUARTERS

FOR THE

Bee-Keepers' Convention,

NOVEMBER 19 & 20, 1891.

SPECIAL RATES TO DELEGATES.

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OUR BOOK PREMIUMS.

We desire to get our friends all through the country to aid us in increasing our list of Subscribers to the

AMERICAN BEE JOURNAL—Weekly, 32 Pages, $1.00 a Year; and

The ILLUSTRATED HOME JOURNAL—Monthly, 32 Pages, 50 Cents a Year.

We make the reader this proposition: If you will get us **Two New Subscribers** to the BEE JOURNAL, or **Four** for the HOME JOURNAL, with $2.00 for the year, we will **present** you with either of the following Books, as you may choose:

DOOLITTLE'S QUEEN-REARING,

with Appendix— 170 Pages, bound in paper. Or

MILLER'S "YEAR AMONG THE BEES,"

which contains 114 Pages, bound in cloth.

Sent FREE of postage, as pay for work to be done for us. Clubs need not be located at one post-office, and for either or both journals to the same or different addresses:

THOMAS G. NEWMAN & SON,

199 Randolph Street, - - CHICAGO, ILLINOIS.

THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

Our Club Rates are: $1.90 for two copies (to the same or different post-offices); and for THREE or more copies, 90 cents each.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVIII. Nov. 12, 1891. No. 20.

Editorial Buzzings.

We Know the little busy bee,
Of which the poets sing,
Points out a moral to us all,
And does it with its sting.

Every Day is filled with useful lessons, if we would but observe, note, and learn as we go.

Our Friend, Hon. Eugene Secor, is now editing the Apiarian Department in the *Farmer and Breeder*, published at Cedar Rapids, Iowa.

When their labor is over for the day the bees rest in chains suspended from the ceiling of their habitation, one bee clinging by its forefeet to the hind feet of the one above it, until it seems impossible that the upper one can be strong enough to support the weight of so many hundreds.—*Professor Jaeger.*

Glass in Crates when shipping comb-honey was the subject of an editorial on page 135. After stating the Ruling of the Western Classification Committee, on June 23, 1891, that "honey in comb packed in boxes having glass fronts, should not be received for shipment, unless fronts are fully covered and protected," we remarked thus: "We must labor with the committee, and try to have the order revoked."

This advice has been acted upon by quite a number of apiarists all over the Northwest, and again bee-keepers are successful, as will be seen by the following letter from Byron Walker, dated at Glen Haven, Wis., on Nov. 4, 1891:

You can tell the readers of the AMERICAN BEE JOURNAL that I have secured a ruling from J. H. Ripley, allowing honey in cases with glass fronts to be shipped in "crates" protecting but *not concealing* the glass. I sent him one of my packages ready for shipment, and put the facts in the case before him in writing. This rule takes immediate effect. BYRON WALKER.

In *Gleanings* for Nov. 1 there was an article on the subject, asking bee-keepers to write to Mr. Ripley about his ruling against glass in crates, and we presume that he has been deluged with letters. S. T. Fish & Co. have also been laboring with him on behalf of honey dealers.

Bee-keepers can generally get what they unite in asking for in the line of rulings of postoffice and railroad officials, etc., because they act like the bees, and make such a "buzzing" about their ears, that they are glad to accede to the demands.

Our thanks are hereby tendered to Mr. Ripley for his consideration of our demands for justice.

Forget Not that the Northwestern Convention convenes next Thursday (Nov. 19), and that you should make arrangements at once to attend. Quite a number have, during the past week, written to us that they intend to be present. "Come up to the Feast."

American Apiarists seldom have anything to complain of in the treatment they receive in any country of the world, but by referring to page 623, it will be seen that Mr. Fleischmann has written an article for a German bee-periodical, which is very unfriendly as well as unjust. The Rev. Stephen Roese has replied to it for that periodical, and translated both for the AMERICAN BEE JOURNAL, as well as a very friendly editorial on the same subject from the pen of our friend C. J. H. Gravenhorst, of Braunschweig, Germany. For the latter, and his references to us, we make our politest bow.

While it is true that the first bees brought to America was landed at Boston in 1670, still for 150 years at least apiculture received but little attention, and was not carried on as an exclusive occupation.

It is not yet 40 years ago that the books of Langstroth and Quinby were published, and these marked the beginning of the era of scientific bee-culture.

In 1861 the first number of the AMERICAN BEE JOURNAL was published, and that has rendered much valuable service for 30 years — and now the number of those keeping bees in America is about 300,000; and the annual honey product, in ordinary years, amounts to about 100,000,000 pounds, which is worth at least $10,000,000. The wax product is worth about $750,000. These are not what Mr. Fleischmann so flippantly calls "honey-production on paper," but sober facts.

We are well aware that the Census Report of 1880 contained many errors, and have often pointed them out.

One simple item will show its error so palpably that no further words will be necessary. California's honey crop is the largest of any State, and yet in the Census Table it is credited with only about one-half as much as Arkansas, one of the States producing but comparatively a small amount of honey!

It also gives North Carolina credit for 50 per cent. more than Michigan, and more than Illinois or Iowa! Such "statistics" are very misleading, to say the least.

Last year the honey crop of California alone amounted to 6,500,000 pounds. Over 5,000,000 pounds were shipped to home and foreign ports. This is one-fourth of the whole amount credited by Mr. Fleischmann to all the States and Territories of North America.

Of course, the Census Bureau made a great blunder, and it is, in a measure, responsible for Mr. Fleischmann's attack on Ameriban apiarists—but not for his malignity or abuse.

It is a notorious fact that the statistics given in the census of 1880 are utterly unreliable! This was admitted by Col. C. D. Wright, Chief of the Bureau of Labor Statistics at Washington, who was one of the principal persons who directed the formulating of the census of that year.

In an address delivered before the Social Science Association at Saratoga, N. Y., in 1887, Col. Wright reviewed the whole census matter, and pointed out its shortcomings, and then said:

> These two questions—capital invested and average wages—as answered by the census, illustrate the fallacy of attempting to solve a certain line of economic questions through the census as it has existed. In making the criticism, let it be understood that I arraign myself as severely as any one else; for within a few years I have followed, in all the census work in which I have been engaged, the old form; nor did I fully comprehend the enormity of the error, and the infinite harm it has done, and is likely to do.

With this admission by Col. Wright, the assertions, arguments and innuendoes of Mr. Fleischmann fall harmlessly to the ground. "The earth labored and brought forth a mouse."

* * *

Those who are in arrears for subscription to the BEE JOURNAL for this year are reminded that the year is about closing, and it is time to pay up for this year, and add a dollar for next year.

Nebraska Convention.—The third annual convention of the bee-keepers' association of York County, Nebr., will be held at the home of L. D. Stilson, south of York, on Wednesday, Nov. 18, 1891, at 10 a.m. A full attendance of bee-keepers is desired, as business of importance to the trade will be presented for action.

A programme consisting of essays on the following subjects, by the persons designated, each to be followed by short discussions is sent to us by the Secretary, Mr. L. D. Stilson:

The Harvest just passed; can we improve upon it?—E. A. Butterfield.

The Hive I use, and why I use it—S. C. Gorham.

Bee-pasturage and honey-plants; how can we increase them?—P. S. Hull.

Honey in the household—Mrs. John Gunnell and Mrs. L. D. Stilson.

Bees on the farm—S. Spellman.

Bee-keeping, an occupation for ladies—Mrs. E. A. Butterfield.

What do I know about bees?—Geo. Rossiter.

What I do not know, but I wish I did know—L. D. Stilson.

Natural or artificial swarming—Chas. White.

Difficulties of a beginner, and how can I overcome them—B. Spurlock.

Profits of the apiary, questions by the Secretary.

◆

If You Have any honey to sell, get some Honey Almanacs and scatter in your locality. They will sell it all in a very short time. We have a few Almanacs for 1891, which we are selling at half price.

◆

Every American citizen is interested in the poet Whittier, who will celebrate his 84 birthday on Dec. 17. Frank Leslie's *Weekly* for Nov. 7 has a very striking full-page portrait of the poet, accompanied by a discriminating article as to his position in American literature.

◆

Ground Cork is the best packing material for bees in Winter. It never becomes damp, and it is a thorough non-conductor. It is so cheap that its cost is practically nothing.

Ants in the Apiary.—In cold climates ants do little, if any, harm, but they are troublesome at the South, and California bee-keepers complain of them. The *Scientific American* recommends the following method when the ants become annoying:

Buy ½ pound or more of corrosive sublimate, powder it very fine, and strew the same sparingly on the ground, also in the crevices, nests and trails of the ants, and I guarantee the ants will leave your lawn and premises as quick as they have come. Corrosive sublimate is a deadly poison, and should be handled with care.

◆

Harry Stites, M. D., United States Examining Surgeon of Harrisburg, Pa., has purchased the entire apiary of the late H. K. Peffer (which consists of Italian bees and apiarian implements), and it was shipped last month to the Doctor's fruit and pineapple farm at Jewell, near Lake Worth, Dade County, Florida.

◆

Besides a number of prominent apiarists from all over the Northwest, the editors of *Gleanings* and the *Review* will attend the Northwestern Convention at Chicago next week.

The editor of the AMERICAN BEE JOURNAL expects to be there to enjoy the feast, if health permits. He has been quite unwell for the past week or two, and may not be able to furnish essays promised for several conventions. If such are not received by the Secretaries in due time, this notice will furnish the reason.

◆

Harmony broken, produces disagreeable effects everywhere. The most sensitive are the most appreciative. The more enlightened are beginning to observe and understand this subtle philosophy of cause and effect.

◆

The North American Bee-Keepers' Convention will be held at Albany, N. Y., Dec. 8 to 11.

Queries and Replies.

Holes in the Sides of the Cells.

QUERY 792.—My bees averaged 50 pounds of comb-honey per colony, Spring count, and have plenty of stores for Winter. I left a few partly-filled sections on the hives, long after the bees had stopped storing honey. When I took them off, the bees had removed the honey, and the sides of the cells were full of little holes. This was the case with the combs that had been filled and capped. What was the cause?—Minn.

We have never seen that.—DADANT & SON.

I cannot tell without knowing more of the facts in the case.—M. MAHIN.

I could only guess, as I have never seen a case like it.—C. H. DIBBERN.

Perforated by the bees, if not done by larvæ of the wax moth.—J. P. H. BROWN.

For want of other employment the bees probably cut the holes.—R. L. TAYLOR.

They wanted the honey down where they could use it during cold weather.—JAMES HEDDON.

"I do not know." I should suppose some insect must have done it. I cannot suggest even the perpetrator.—A. J. COOK.

I do not pretend to *know*, but I suspect the bees did it during the warm weather, when they had nothing else to do.—EUGENE SECOR.

They took out the honey, and carried it below into their brood-nest, and in doing so, ate through the walls of the cells.—MRS. L. HARRISON.

I do not remember having seen a case such as the writer describes. When honey has been removed by robbers, you will often see a case of this kind.—H. D. CUTTING.

If I understand you rightly, holes were in the cell walls. That looks a little as if robbers had been at work. Perhaps merely the bees of the hive.—C. C. MILLER.

I have not had holes gnawed in combs in supers when on the hive, but have had it done when placed at a distance from the apiary for the purpose of having the bees clean the combs of honey after extracting in the Fall, if they were given free access to the combs.—A. B. MASON.

It is not uncommon to find holes in the sides of the cells in delicate combs, if the honey is removed by the bees in cool weather. The bees will readily repair the combs if used again for surplus.—G. L. TINKER.

The same as causes the bees to carry honey from the outside of the outside combs to the center on approach of Winter. This is done so as to concentrate the honey as near the cluster as possible, thus guarding against starvation in a long-continued cold spell.—G. M. DOOLITTLE.

I see nothing strange in this. Bees often remove the honey from unfilled sections, and tear the combs, to some extent, in doing so. They probably had room for the honey below, and took it down to the brood-chamber. As to the cause, we can only judge by the effect, which, I think, is rightly judged above.—J. E. POND.

If your bees were well supplied with stores in the brood-chamber, I can see no reason why they rifled the sections like robber bees. I often leave partly-filled sections on the hive to help the bees in the way of stores when they are a little short, and though the bees will consume the honey as they need it, they never damage the combs like robber bees. It is possible that your section-cases fit the hive so badly that robbers got into them.—G. W. DEMAREE.

It is often the case that the bees will remove the honey to the breeding apartment, to have it more convenient for Winter use. In doing so, they sometimes injure the combs more or less. In the absence of more particulars, it would be hard to account for the holes mentioned in the query. They may be the result of a visit by the wax moths.—THE EDITOR.

* * *

Sometimes it is important to know the colony from which a swarm issued unseen. This is Dzierzon's method:

After it has been hived and removed to its new stand, let a cupful of bees be taken from it and thrown into the air, near the apiary, after having sprinkled them with flour; they will soon return to the parent colony, and may easily be recognized by their standing at the entrance fanning, like ventilating bees.

Topics of Interest.

Driving Bees, Winter Food, Snow, Etc.

G. M. DOOLITTLE.

A subscriber to the AMERICAN BEE JOURNAL propounds the following questions, which I will answer by number:

1. "Would bees, driven out now into a hive, without honey in it, work as well as a swarm?"

The date given in asking this question is Sept. 3, and if I am to reply for that date, I should say that neither a driven or a natural swarm would do anything in this locality after that time. However, there are sections of country where the asters, golden-rod and heart's-ease abound, in which both might be got ready for Winter by filling their hives with combs when they were hived. As a rule, however, all increase should be made during June and July.

As to which is the best, a driven or a natural swarm, good authorities differ; some claiming that a driven swarm is as good as a natural one. I notice, however, that the advocates of natural swarming are increasing, and others diminishing, as the years go by.

It is always safe to say, in any event, that a swarm issuing in the "good old way," is fully as well equipped for the battle of life, if not better, than they can possibly be by the interference of man by way of a division. In artificial swarming the division of bees, as to the proper amount taken, suitable age, etc., is not likely to be as nearly perfect as it is by nature's plan.

FEEDING BEES FOR WINTER.

2. "What time is best to feed up for Winter, and how is it done?"

The proper time to feed when bees are lacking in Winter stores, is at the earliest possible moment after the bees cease to make a living from the fields, and as soon as most of the brood is hatched out of the combs. This time comes about Sept. 1, in this locality, and if possible, I should say feeding for Winter ought to be done in September in any locality. This gives the bees a chance to get the food evaporated and sealed over before freezing weather sets in.

Unless plenty of honey is on hand, make a food of water, sugar and honey, as follows: Take 15 pounds of water, and bring to a boil; add 30 pounds of granulated sugar, stirring it in. Bring to a boil again, and upon setting from the fire, stir in 5 pounds of honey. This makes 50 pounds of food, equal to the best of honey, and it is ready to feed as soon as lukewarm. The honey is added to prevent crystalization in the feeder and combs. If the honey is not at hand, add a little vinegar or tartaric acid. The honey is much better, however.

To feed, remover the cover or cap from the hive, and set on top a large baking tin or basin, or a milk pan of the right size. Fill it with syrup, and put on a float of some kind, to keep the bees from drowning. I generally pull up a handful or two of grass near the hive, and put it on top of the syrup for this purpose.

Now, open a hole in the honey-board, or turn up one corner of the quilt, where such is used, and set a chip from the hole to the edge of the tin, so the bees can climb up to the feed. Pour a very little feed down through the hole to show them where it is, and put the cover on over all, making sure that no crack is left so any robber bees can get in. To guard against robbing, it is best to feed just at night, at all times.

PREVENTION OF ROBBING.

3. "What is the best and right thing to do when bees are robbing?"

The best and right thing to do is not to let the bees get to robbing. This is quite easily accomplished by keeping none but strong colonies, and allowing each colony an entrance, or doorway, according to the strength of the colony. In early Spring, when robbers are the most persistent, allow only room for one or two bees to pass at a time for the weak colonies, and give not more than 2 inches in length of entrance to the very strongest. Colonies so weak as to be unable to defend themselves should be united with others.

If it is desirable to save a colony which has been neglected till robbing has commenced, close the entrance so that only one bee can pass at a time, and leave them until near night, when all the robbers have gone home, then go to some strong colony, and get a frame having the most young bees hatching from it that you can find. After brushing the bees off from this, insert it in the center of the colony that has been robbed. Now, carry the hive to a darkened cellar, and leave it for three or four days, till the robbers have partially forgotten the place, and the young bees have hatched from the comb. Take the hive from the cellar in the evening, and place where it stood before, and you will have no further trouble, if you are careful (as you ought to be at all times) not to let the bees get a taste of exposed sweets.

BEES UNDER SNOW IN WINTER.

4. "Would bees smother under a foot or two of snow?"

No; not if the colony was in a chaff or chaff-packed hive, as they should be in all Northern latitudes. If in a tight box-hive, and snow and ice should fill the entrance, they might do so.

The danger to bees when covered deeply in snow, seems to come from their getting too warm. This causes them to become uneasy and try to get out. If this state continues long, they are apt to contract the bee-diarrhea and die. This trouble is almost sure to come where hives are within an inch or two of the ground, so that the warmth from the ground adds to the warmth created by the bees. My loss in this way has been greater than from all other causes combined, when wintering on the summer stands.

5. "Would it pay to take a big swarm of bees, that had been driven for their honey, as a gift at this time of the year, and feed them for Winter?"

That would depend upon whether you had combs to give them or not. If you had six or seven frames filled with combs and honey which you could spare to put in an empty hive, and hive this driven swarm in, it would pay well; but if you have no combs, and had to feed to have them built, and for Winter stores also, it would be a doubtful investment. By the plan of combs of sealed stores, I have saved many doomed colonies.

Borodino, N. Y.

Honey-Plants of Indiana.

MRS. W. A. MOORE.

Wild Parsnips—From June until late July.

Phacetia—June to October. A magnificent honey-plant.

Cynoglossum—June to October. Rich in honey; bees just revel in it.

Honeysuckle—June until October.

Mignonette—June till October. Honey from mignonette is of the most superior flavor.

Buckwheat—From June until September. Bees always busy upon this; besides enough honey is wasted by evaporation to perfume the air for some distance.

Hollyhock—From June until October. "Always covered with bees."

China Aster.—June to October.

Wild Touch-me-not—June, September.

Hedge Nettle—From June till August.

Wild Yellow Primrose—June, September.

Field Bean—June, July.

Spider Flower—From June till October. A wonderful honey-producer. The sight of a whole plant loaded with honey is enough to set any bee-keeper crazy. One acre of spider flower will yield 60 gallons of honey.

French Pink—June to September. Rich in honey.

Burdock—July, October.

White Smartweed—July, October.

Pink Smartweed—July, October. All plants of this family produce an abundance of honey.

Figwort—July, October. This flower is constantly filling and refilling with the purest honey.

Sunflower—July to October.

Ageratum—June to October.

Paint Brush—July to October.

Mourning Bride—July till October.

Star Cucumber—July, September.

Blue Lettuce—July to September.

Peppermint—July till September.

Bergamont—Early July till September.

Catnip—July till September. This plant will well repay cultivation for honey alone. "The bees work upon it from early morn till dewy eve."

Son Thistle—July to September.

Trumpet Creeper—July to September.

Garden Japonica—July to September.

Silk Milkweed—July to September.

Purple Milkweed—July to September. Milkweeds furnish good bee-pasturage.

Rose of Sharon—July to September.

Thistle—July to September. Always alive with bees.

Snow-on-the-Mountain—July to early September.

Wild Lobelia—July to September.

Clematis—From July to August.

Wild Ageratum—August to September.

Wild Prince's Feather—August to September.

Ragweed—August, September.

Iron-weed—August, September.

Ox-eye Daisy—August, September.

Squash—August. The squash yields much honey.

Pumpkin—August to September. It yields fine honey.

Red Currant—May.

Gooseberry—May. In color and flavor gooseberry honey is preferred to white clover.

Wild Crab Apple—May. An abundance of clear white honey is yielded from this; equal in quality to that of white clover.

Blackberry—May, June.

Sweet Clover—July to October. Honey secured from this plant is of a superior quality.

Bittersweet—July to August.

Wild Plum—May. Fruit blossoms afford a fine harvest for bees.

Scarlet Salvia—July to October.

Garden Sage—July, August.

Ground Ivy—May, August.

Blue Curls—May to September. The large labiate family are all fine honey yielders.—*Exchange.*

Modern Bee Vocabulary, Etc.

G. W. DEMAREE.

I have been interested and somewhat amused at the discussion in the AMERICAN BEE JOURNAL, of late, concerning the word colony, stock, etc., as applied by modern writers to bees in the organized state.

It has occurred to me that if the difference is to be settled by appealing to the Dictionaries, or by going back of the Dictionaries to the fountain head—the manner in which the words in question were used by the old writers—I am quite sure that no very satisfactory conclusion will be arrived at. I hold that modern bee-culture must necessarily have a vocabulary peculiar to itself, because modern bee-culture is essentially a new thing, and either new words must be coined, or old words must take on new meanings to fittingly describe it. In all such cases the latter is generally done.

Bee-culture in the ages of the past was so fettered with superstition that no uniformity of expression is found in any of the old works on bees, as far as I have examined them.

An accurate old English writer of a hundred years ago, in a long essay on bees, bee-hives, etc., found in an old work in my library, uses the word "stock" in the sense of "hive of bees" but one time, and there in connection with increase by swarms. Thus: "Set aside —— stocks for swarms." The word "stocked" is frequently used. Thus, "unite hives that are thinly stocked." The word *bees* after *hives* is dropped, being gramatically understood.

When this accurate old English writer of a hundred years ago quotes Pliny, Erasmus Darwin, Calumella, etc., he uses the terms "hive of bees," or "hives of bees." He never uses the terms "stock of bees," or "stocks of bees." But he speaks of hives being strongly "stocked," or thinly "stocked with bees," in the sense of being well or poorly filled with bees.

I was pleased to see that he used the terms "prime swarm" for the first swarm that takes the old queen with it, and "after swarms" when speaking of the swarms that follow with virgin queens. I can see no more impropriety in saying a "hive of bees," or even a "hive," dropping the word *bees* after *hive*, than in saying, "Thou shalt be saved and thy house." The inmates of the house being gramatically understood.

The word "colony" is not used by this old writer in connection with bees. In fact, I do not remember of seeing the word colony in any *old* work on bees used in the sense of a hive populated with bees. I think it is safe to admit that it is a modern term when used in that sense. But to my mind this is no objection to the word as a nomenclature. In fact, it seems to me that it fills a long *want*, whether the *want* was felt or not.

It must be patent to any observing reader of ancient bee-literature, that no uniformity of expression is found therein. It is painfully defective of uniform nomenclature. Hence, the necessity of some word to be used as a uniform nomenclature, and I know of no better word than the word "colony," or "colony of bees."

The word "colony" is a desirable acquisition to our bee-literature," because it is used in no other sense than as a nomenclature. The word "stock," or "stock of bees," will never be adopted by American bee-keepers. It is an inappropriate term when used as a nomenclature, because few words have a broader meaning than this word. I may colonize a *hive* with bees, and thereby form a "colony of bees." But when I "stock a hive with bees," I do not make it a "stock of bees."

My apiary is "stocked" with more than one race of bees. I have the Italian stock, the Carniolan stock, and the Punic stock. I keep now but the best "stock" of bees, and if I discover that my "stock" is deteriorating, by reason of *in-breeding*, I introduce fresh "stock" from abroad, and thereby improve my "stock." I sometimes breed from imported "stock," and sometimes from improved home-bred "stock." At some seasons of the year my hives are strongly "stocked" with bees, and at other seasons of the year they are thinly "stocked."

Finally, my apiary may be said to be well "stocked" with bees, but I would not like to say it is "stocked" with 70 "stocks."

The above will suffice to show how confusing and inappropriate the word "stock," or "stock of bees," would be if adopted as a nomenclature.

Christiansburg, Ky.

[Brother Demaree is right. The word stock furnishes a regular kaleidoscope of meanings, and is indefinite and inappropriate when used for the word colony, as applied to bees.—Ed.]

Electricity and Apiculture.

HENRY K. STALEY.

Electricity and apiculture should go hand in hand. They are two pursuits that have made mighty strides, and accomplished great achievements for the benefit of mankind in the last few years, yet it seems that the two have been completely isolated as regards any mutual benefit existing between them.

Electricity is proving itself utilitarian. Indeed, there is seemingly nothing to which it cannot be applied with greater economical efficiency than the agent applied to that object or pursuit before. Thousands and thousands of men are now numbered among its laborers, and millions upon millions of capital have been laid at its feet.

We see it taking an active part in electro-plating, making it possible for people of small means, who are endowed with a love of art, at once able to procure copies of some of the costliest and most renowned pictures in the world to-day, at a mere bagatelle.

We see the electric street railway cars displacing those of the old horse type, and doing away with all that beastly, inhuman suffering. We see the clean, frugal, responding-at-the-touch motor in stores for ventilation, and in the workshops for manufacturing purposes, applied to almost every kind of mechanical device; yet I have never heard of honey extractors being operated by electricity where a great deal, or even a small amount of extracting was to be done.

From one to any number of extractors could be manipulated simultaneously by means of shafting and gearing, in conjunction with electricity, at a small expenditure of money. If the apiarist lives in a town, he could either buy or rent a motor, and then contract for power from some electric light company. The motor could be adjusted to operate a great many devices. He might want to run a buzz-saw, and manufacture his own hives, surplus sections and other bee-paraphernalia; or by attaching it to a churn or washing machine, relieve his wife of a great deal of manual drudgery in the way of making butter and washing clothes.

Now, with reference to those enormous apiaries situated away up on the Rocky Mountains, or down deep in the valleys of California, which are practically inaccessible to any kind of power save steam and compressed air, and that at great expense on account of the exorbitant price of fuel. We see that to run a steam plant would require a great amount of fuel, along with the other operating materials, and experienced and skilled labor, which the apiarist could ill afford.

But take, for instance, the great natural resources of energy in the West which are going to waste, in the way of waterfalls, having a drop of from 20 to 30 feet within 2 or 3 miles of the bee-keeper. By means of turbine wheels and a dynamo at the waterfall, this energy could be electrically transmitted through insulated copper wire to the motor at the home of the apiarist, and do all of his work; and not only that, as the surplus current could be put to charging storage batteries, by which he could have electric fans and electric lights in his own house.

Bee-keepers with a few colonies, if not too far distant, could bring their storage batteries to him, have them charged for a small sum, and go on their way rejoicing. I am sure this would be both beneficial and economical for the bee-keeper. It has proven itself so for heretofore unprofitable mines, on account of being situated in uneconomical locations with respect to power.

As energy transmitted electrically is able to turn out about 70 per cent. of the primal energy of the waterfall, after 3 or 4 miles travel, it will be seen that if the apiarist is on the very peaks of the Rockies, he can have cheap power at his command, and utilize it in ways greatly diversified. Of course, I am now referring to large apiaries, where a great deal of work is to be done, and which are depended on for the bread and butter of the family.

Now, I believe this could be made thoroughly practicable in view of what is going on daily around us. Take for instance dental electricity, and see how heretofore unnoticable cavities in the teeth are brought to light by means of the miniature incandescent lamps. By means of it, the hidden recesses of the stomach are brought to light, so that the doctor can perceive what is going on therein as easily as though there was an invagination of that organ.

Board the electrically equipped steamers, and there, even upon the bosom of the mighty and heaving deep, the electric light is at your bedside. Go down into the mines, and see the train of cars running along at a jolly rate under their burdens, at the command of the motor man. Here you will see electric percussion drills, operating under power brought 5 or 6 miles from its primal source. What before were unprofitable regions and unoccupied, are now teaming with life and mechanical activity. The mines are lighted by electricity, thereby avoiding all danger from the explosion of methane or fire-damp.

But on the other hand, suppose that the apiarist has only a few colonies. He can at an inexpensive expenditure procure one of the many small portable motors now on the market, which, in connection with open circuit batteries, will operate his extractor at high efficiency. The case of the chemical fuel for the batteries would cut but a small figure. From 15 to 20 cents would be the probable amount for 12 hours' consecutive running; and then think of the time and labor saved!

Let us suppose that the motor, extractor and batteries are all connected up and ready for operation. Having put the first set of uncapped combs in his extractor, he throws the switch, and having standardized or regulated the motor to the right speed for the extractor, he leaves his honey-house and secures another relay of combs from the hives. By the time he returns to the honey-house it is time for a reversion of the combs. It takes but a jiffy to do this, when the switch is thrown again, and by the time his second set are uncapped, his first set are ready for the hives. Supernumary laborers are done away with, and the apiarist is able to do his work frugally and expeditiously, thereby avoiding the tendency to create robbing, and its concomitant troubles in times of drouth or poor honey-flow.

And I desire to say right here, that I believe as yet apiculture to be in an abacial attitude. The old hand-turning process must be relegated; time is money to the bee-keeper, especially when there is a shower of honey, as in the case of apple bloom, locusts and the linden. We must keep apace with the times. We live in an age of inventiveness, and hence I believe in the saying of

> "Be not the first by whom the new are tried,
> Nor yet the last to throw the old aside."

If you are convinced, after a thorough trial of the advantages of new inventions in the way of hives and bee-fixtures, and you see that the time and money gained will make up for the cost of the new inventions in a short time, by all means relegate the others to the rear.

You may consider honey a luxury, but I think as the price of sugar decreases, there will be less and less of it bought by the poor and needy, because the difference in price between the two will represent too much money. About 25 pounds of sugar and 10 of honey at a dollar each; how are you going to reconcile them for the *vox populi?* I maintain that honey, in view of its medicinal properties, should be on the table of every man.

Now, if new inventions would reduce operating materials and expenses to such a minimum of cost as to allow of a scaling down in the price of honey proportionate to the dropping in sugar, and at the same time allow the apiarist to make a fair commercial profit, honey would not be held in the light of a luxury as it now is, but would be consumed to a greater extent, and treated more in the nature of lard and butter. That is the way to secure a market for our honey.

We want people to sweeten their coffee and oat-meal with it; spread it on their bread and buckwheat cakes; use it for medicinal purposes; put their fruits up in it and what not. But if the difference in price between sugar and honey is allowed to increase, I do not see how we can attain that much sought after desideratum, *i. e.*, a ready market for all the honey we can produce, at a fair commercial profit.

We should not forget that under the "McKinley Tariff Bill" a bounty of 2½ cents per pound is paid to the sugar producers of this country. Senator Sherman feels that the beet sugar industry, like Eli Whitney's cotton gin, will revolutionize the production of sugar in this country, and that it will only be a matter of few years, under wise and discriminating legislation, that we will produce all the sugar we need, and at a cheaper price than we can buy it abroad, as we are a practical people, and live in one of the finest beet sugar growing countries in the world.

Now, then, we, as apiarists, should not be loth to see these things, nor slow to employ time and labor-saving machines. This is no time to tarry hours and days in the apiary, waiting for a swarm to issue. A great many people do not depend upon bee-keeping as a bread-and-butter pursuit, on account of the uncertainty of good honey seasons, and therefore carry on bee-keeping in conjunction with some other pursuits, and cannot afford to be in the apiary all the time. They do not feel like going into the more experimental part of clipping wings, using queen cages, and all the other clap-trap of self-hiving devices. If we could devise means whereby we could know to a certainty when a swarm will issue, we would have accomplished one of the greatest attainments in bee-culture.

I am an exponent of natural swarming to the extent of letting each colony cast one swarm, and no more. If divided artificially or kept from swarming, I believe they lack the energy contemporaneous with natural swarming. Alley's swarm-catcher and self-hiver I believe have been weighed in the balance and found wanting, along with the rest of a kindred nature.

For some time past I have been turning my thoughts in the direction of electricity. I do not say that I have solved the swarm question. I was not born an inventor, but I give my ideas for what they are worth, and trust that some one will be able to exhibit a complete, successful and practical model at the World's Columbian Fair, at Chicago, in 1893, or before that time if possible.

It must consist of a standard hive now in use, so arranged on an apparatus as to allow two electrical terminals to come together when a certain number of pounds of bees leave the hive, thereby closing the circuit and ringing the bell in the house. The hives could be numbered and wired upon the anunciator plan, or in the cheap system connecting all the hives in multiple, using one bell and the earth for return circuit. In this way any number of hives could be connected up on one bell with a couple of batteries.

Suppose now, we have wired on the annunciator plan, and then if colony No. 10 casts a swarm, down goes the coinciding dial on the annunciator, and the servant brings the information to the master in the library, who is reading Doolittle on "Queens and Queen-Rearing," with as much stoicism as though she were only handing him the daily paper.

He now proceeds to colony No. 10, which he removes to a new location, and hives the swarm in a new hive with full sheets of comb-foundation on the old stand. The partly-filled surplus receptacles of the old hive are now transferred to the new hive, and we have "let nature take her course," and have two good working bee-armies at our command.

You may make light of this, as people have of other great changes before, but still I believe the time will come when we will know for a surety, when a normal prime swarm issues from a healthy normal colony. The above problem presents many intricate perplexities, which I have not as yet been able to solve. If we calibrate the distance between the two terminals at a distance of ⅛ of an inch under a pressure of 100 pounds (and this we will assume to be a fair load for a hive and its contents) for bringing the terminals into contact when the weight has been decreased 10 pounds, we see that that distance should vary as the weight of the hive fluctuates. We should so fix the distance between the two plates as to allow for a medium sized swarm under a pressure of 100 pounds.

Now, it is manifest that if we maintain the distance the same under 200 as 100 pounds, our circuit will fail to close, and we will lose our swarm. What we want is an inexpensive mechanical device for the hive to rest on, which will graduate the difference between the terminals in proportion to the weight. In other words, when 10 pounds of bees leave the hive under a pressure of 200 pounds, the distance will be so diminished in proportion to the increase in weight, on account of the less lifting power of the springs, as to be able to make contact, and close the circuit. Now, the same thing should be attained under a pressure of 100 pounds, albeit the distance between the springs is greater, but we see that we have a greater lifting power in the springs.

I recognize the plexiform ramifications in the above, yet I remember that great inventions have had their obstacles to overcome, which I need not recite, as they are now revolutionizing the world, and are too multifarious to mention.

Cincinnati, Ohio.

Bee-Keeping in America—A Contrast.

REV. STEPHEN ROESE.

Following is a translation of an article written by P. Fleischmann, and published in the July number of the *Leipziger Bienen-Zeitung :*

"The *Stone of the Wise*, in No. 13, 1890, gives the annual honey and wax production of the United States, according to the last census, and as those American lords are always dealing with endless figures, which find their way into our German bee-periodicals, and make our German bee-keeping, in contrast to theirs, appear as 0, I think it wise to refer to official figures to prove that, on the other side of the water, more honey is harvested on paper than in reality, and that the 100-pound hives which, even in Winter, the newspaper editors keep hurling about as bird baits, are a scarcity, even in the promised land of North America, and according to the unwished-for figures which I shall produce, North America is far from the land where milk and honey floweth, although these lords across the water almost compel us to believe that it is that land.

"If we consider that the United States comprise an area almost as large as all of Europe (the latter having 10,337,460 square miles, and the former 9,187,350 square miles), and that the immense territory of the United States is inhabited by 56,000,000 people, and bee-pasturage cannot be limited, then we of old age-weakened Europe will still compare favorably with young America.

"The *Stone of the Wise* reports that in old times, and in all countries, as far back as history reaches, bee-keeping has formed an important branch of agriculture, and that bees were introduced into the United States by Germans—perhaps by immigrants, who settled in Germantown, near Philadelphia.

"Apiculture has, therefore, made but slow progress in that country, as in this pursuit great patience and endurance is needed—a virtue which all mankind do not possess, and especially all Americans!

"It appears, then, that after a lapse of 200 years since the introduction of apiculture into the United States, the last census contained the report of an annual honey production of 25,743,208 pounds, and a wax production of 1,105,689 pounds.*

"Following are the best honey-producing States:

	Honey.	Wax.
Arkansas	1,012,721	42,354
Georgia	1,056,034	69,318
Illinois	1,310.809	45,640
Indiana	976,581	31,637
Kentucky	1,500,565	46,912
Michigan	1,028,595	32,088
New York	2,088,845	79,566
North Carolina	1,591,590	126,268
Ohio	1,626.847	56,333
Pennsylvania	1,415,093	46,610
Tennessee	2,130,689	86,521
Virginia	1,090,451	53,200

"These are specifically the Middle States, and we find no mention of California in the statistics.*

"As California furnishes honey to Germany, what a strange mess must be sold for California honey, and for which good German money is paid, if California is not even classified with honey-producing million-pound States!

"It is interesting to note that the honey and wax production is much alike, with the exception of North Carolina, which State reports an unusually large wax production. What is the cause? Is monopoly ruling there? Perhaps some of the bee-keepers of North Carolina can give us some light on this subject.

"The *Stone of the Wise* reports further, that the widest spread race of bees is the black—a proof of their German origin. Aside from this, all known races of bees are bred—the Italian, Cyprian and Carniolan.

"An annual honey production of 26,000,000 pounds for a population of 56,000,000 is a small proportion—only ½ pound for each inhabitant—and in our estimation incorrect, for the denser the population, the less honey to each inhabitant. But the census report of such a small honey production for an area of territory like the United States, where the land is not worn by cultivation, is less than we were led to expect by the American bee-periodicals, which always indulge in high figures."

After reading the foregoing article I was so much displeased at its unfairness and utter lack of fraternal feeling, that I wrote a sharp criticism to send to the publishers, and which was harsher in its tone than the following, which is a translation of the first draft of my reply:

Mr. Editor:—I am sorry that I am under the necessity of saying to you that the article entitled Bee-Keeping in the United States of North America, which appeared in No. 6, Vol. 7, of your journal has created very unpleasant feelings among the bee-keeping fraternity.

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*See editorial comment on page 614.

I had sent off several copies of that issue to applicants (who saw the advertisement in the AMERICAN BEE JOURNAL that I was your agent) before reading the article in question myself, and from some of the parties have received replies, stating that if the German bee-periodicals will belittle American bee-keepers in such a manner, they did not care to subscribe for a paper which would speak of American bee-keepers as men of little patience and endurance, and, worse than this, as men who practice deception, and are guilty of untruthfulness.

I am compelled to say that the author of the article in question must be devoid of all brotherly love and human kindness, as the article itself will prove.

The writer is a reader and correspondent of four bee-periodicals in the English language, all first-class, and must say that American bee-periodicals in general breath the spirit of love and kindness for each other, and especially for their German brothers across the water; and that the statement that American bee-keepers look upon apiculture in Germany as a 0 is an untruth, for they often wonder that Germany, with so dense a population, can produce such an amount of honey, and they give the Germans praise for such perfect organizations as they have—Sections, Vereins, and Central Vereine—and are not envious of them at all.

The gentleman who wrote that article should not have been so hasty in his statement that it was very wise to take official figures to disprove the statements of his bee-keeping brothers in the United States.

How does he know that the report from 13 States out of 42, and 7 Territories, is a full report of the honey and wax production for that year? The Southern and Northwestern States, and the States and Territories along the Pacific Coast are not even named.*

The gentleman takes the liberty to say that on this side of the water there is more honey harvested on paper than in reality, and that the 100-pound hives in the promised land of North America are a scarcity, and that America is by no means the land where milk and honey floweth.

After he has produced those figures, any novice could disprove the gentleman's statement, for in ordinary seasons it is no uncommon thing to harvest from 140 to 200 pounds of honey per colony, and experts, who have their colonies ready for the honey-flow, have produced as much as 300 pounds per colony; but we always rejoice when the countries of age-weakened Europe compare favorably with young America—especially our beloved fatherland, Germany.

American bee-keepers are not ashamed of the statement of that noted writer on apiculture, Tony Kellen, that at one time America learned from Germany; neither do they seem proud of the fact that in inventions and methods in apiculture America is in advance of Germany to-day.

The *Stone of the Wise*, which seems to be Mr. Fleischmann's chief authority for his statements, must be possessed of great wisdom, indeed, and it is to be hoped that it will not make his statement appear ridiculous, that bees were introduced into North America by the Germans.

I shall not contradict him, but I doubt that apiculture has been carried on in the United States full 200 years,* for the AMERICAN BEE JOURNAL is the oldest bee-periodical in the United States, and its existence dates back only 30 years.

If Germany pays good money for mixed messes of California honey, it is not the fault of American bee-keepers if such fraud does exist, for there is no more honorable class of people in any branch of business in America than bee-keepers. They have confidence in each other, and any member who practices fraud will soon be exposed.

Mr. Fleischmann thinks that he has discovered something wrong with the wax-production statement of North Carolina, and mistrusts that monopoly, and misstatements exist there, and wishes some bee-keeper to give him light on the subject, which, undoubtedly no one will be able to do, for this gentleman seems to be possessed of an eye of jealousy toward his brother bee-keepers across the water.

Mr. Fleischmann looks upon American apiculture as unworthy of notice, for he credits us with only ½ pound of honey to each of our 56,000,000 inhabitants. But here let me say that more honey goes to waste in the United States for lack of bees to gather it, than is in reality gathered, and should the gentleman go to the trouble and expense of a visit to the World's Columbian Fair, the American bee-keepers will show him what love and good-will they entertain for the brotherhood.

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* See editorial comment on page 614.

As a contrast to Mr. Fleischmann's ungenerous article, I have translated from the *Deutsche Illustrierte Bienenzeitung* for October, 1891, an editorial on the same subject, but taking just the opposite view. The editor is Mr. C. J. H. Gravenhorst, one of the most progressive and advanced apiarists of Germany, who constantly reads the American bee-periodicals, and is fully competent to give an unbiased opinion on the subject. Friend Gravenhorst remarks as follows:

The notable elevation and great advancement of apiculture in the United States, in late years, has given it much prominence.

It is surely a matter of no little interest to bee-keepers of Germany, who anxiously watch for whatever occurs in that direction on the other side of the Atlantic Ocean. There apiculture has developed under the most favorable circumstances, by the constant invention of practical methods and implements. By these, our cousins have developed a flourishing condition, diverse from that in Germany, aided by their energy and patience, and differing to some extent in its tendency.

Of the 300,000 or more persons who there keep bees, the great majority do so for profit; that is, they do it for a livelihood; only a small portion of them engage in the pursuit as a side-employment, or for pleasure.

Apiaries of from 100 to 500 colonies of bees are the most numerous, and notwithstanding the low price honey brings in America, many millions of dollars are annually realized from its sale. Besides this, just as much or more comes from branches of industry where honey and beeswax are used, which have been called into existence by these products, and are thus closely related to apiculture.

Only those who are ignorant of apicultural facts will deny that the Americans have outdone us, and that we can now learn from them in many ways, just as they, in days gone by, learned from us the fundamental principles of apiculture; and to this very day they glean from us in that line, and gladly acknowledge it. Although justly proud of their own accomplishments in this direction, they modestly greet and recognize anything from us which they deem of practical value, and use it for the common welfare.

It is pleasant to notice how vigilantly German bee-periodicals watch for the inventions in America. The *Deutsche Illustrierte Bienenzeitung* is no longer envied for having from its inception acted in a sort of mediatorship; in fact, the German periodicals now rather emulate its example.

We must put to practical use everything which appears in the field of apiculture on the other side of the Atlantic. Some things might rather indicate backward steps, but notwithstanding this, with a knowledge of the same, our opinions will be broader, as we cannot be biased by mercenary ideas.

To the energetic and enterprising men who have for many years labored and toiled for the advancement of apiculture in America, belongs Mr. Thomas G. Newman. Born in England, he learned the art of printing, and emigrated early to America. He then became interested in apiculture, and finally became managing editor of the AMERICAN BEE JOURNAL, which was called into existence by Samuel Wagner, in 1861, who felt it to be his duty to acquaint his countrymen with the progress of German apiculture.

I became acquainted with Wagner through Pastor Klein, in the year 1865. I then became connected with him as a co-laborer, and have regularly served the AMERICAN BEE JOURNAL from that date to the present day. During these years I have made it a point to translate the most interesting articles into German, for the several German bee-periodicals, especially the *Deutsche Illustrierte Bienenzeitung*, in order to keep the German bee-keepers posted on the events transpiring in the field of apiculture in America.

When Samuel Wagner died in 1872, the AMERICAN BEE JOURNAL passed into the hands of W. F. Clarke, and shortly afterwards it was purchased by Thomas G. Newman. By his management the BEE JOURNAL soon appeared semi-monthly, and for 11 years it has been published weekly.

Newman is of a poetical nature and talent, and is a practical printer, and perhaps a still more ready and able speaker. I formed acquaintance with this lovable man in 1879, at Kensington, England, and enjoyed with him and friend Dennler the successful banquet of the hospitable bee-keepers of England, at Horsham, at the beautiful country cottage of Mr. Thomas Wm. Cowan, on July 28, 1879.

Thomas G. Newman is also known to many German bee-keepers, for he visited the Wanderversamlung der Deutsche Oestrreich-Ungarischen Bienenzeuchter, at Prague. His residence is in the world-renowned city of Chicago, Illinois, where in 1893 the great World's Fair will be held, for which event the American bee-keepers are now making great preparations. This exhibition, so far as apicultural interests are concerned, will be a grand one.

Thomas G. Newman has, outside of his editorship, compiled and published some valuable apicultural works. One is entitled, "Honey as Food and Medicine," and the other, "Bees and Honey; or Bee-Keeping for Pleasure and Profit."

Newman has repeatedly been elected President of the North American Bee-Keepers' Association, and also of the National Bee-Keepers' Union. The meetings of the former he attends regularly, and is always an able speaker, and is listened to with interest. As Manager of the Union, he successfully defends the rights of American bee-keepers.

Carniolan Conundrums.

J. A. GREEN.

Having been very busy for some time, getting my bees home from out-apiaries, and preparing them for Winter, I have allowed Mr. Alley's conundrums, on page 524, to remain unanswered until now. They are not at all hard.

To the experienced apiarist, Mr. Alley's explanations are as transparent as his statements are unfounded. But if a word of mine may help to prevent the inexperienced from being taken in, it shall be given.

Mr. Alley's reply to my statement in regard to the generally-accepted belief that the meeting of queen and drone may take place a mile or more from their respective hives is simply a "bluff."

He says that "the inexperienced bee-keeper is the only person who would make such statement." I personally know that many of the best apiarists agree with the statements made by me on page 467, and since their publication I have received letters from several of the most prominent ones, endorsing and commending the article.

Mr. Alley asks: "If the Italian drones would fly 2 miles to meet the Carniolan queens, why would not the Carniolan drones fly the same distance and mate with the Italian queens?"

This might be a poser, if it were true that they did not; but Mr. Alley makes it as plain as day in the paragraph above, wherein he says that drones were not permitted to fly from more than one Carniolan colony.

Within a radius of 4 miles from Mr. Alley's apiary, no doubt, there are dozens, and perhaps hundreds, of colonies of Italians.

Suppose, for the sake of illustration, that there are a hundred. Then, even if it were not for the fact that a queen is more likely to mate with a drone from another apiary than with one from her own, there would be 100 chances that a Carniolan queen would mate with an Italian drone to one that she would mate with a Carniolan.

On the other hand, there would be only one chance in a hundred for an Italian queen to mate with a Carniolan drone. This fully answers both of Mr. Alley's questions.

Mr. Alley says: "I have explained how they (the "golden" Carniolans) were produced, and have informed the readers of the BEE JOURNAL of the method by which any one can reach the same results." Mr. Alley has not "explained" how they were produced. He has *told* how they were produced, and I, and others, have furnished the explanation.

Undoubtedly, any one who follows Mr. Alley's methods will achieve the same results, but it is to be hoped there are not many who, having bred a bee fifteen-sixteenths, or more Italian, would claim it as a typical Carniolan, and by specious argument attempt to bolster up that position.

I appreciated Mr. Alley's compliment to the manner in which I have treated the subject. I do not consider the columns of a public journal a proper place for abuse and vituperation. I would rather prove a man a swindler than to call him one. If I have treated Mr. Alley in a manner different from that of some others, it does not in the least follow that my private opinion of his business methods is at all different from that of those whose opinion might be too emphatic to look well in print.

I know that by continuing to oppose Mr. Alley in this matter, I am probably throwing away my only chance of getting from him those queens ordered and paid for over a year ago, but as I had about given them up, it will not be a fresh loss.

Since the publication of my article, on page 466, he has shown a commendable, though unsolicited anxiety to fill the order "when they were needed," though before he paid a noble disregard to communications on the subject.

Dayton, Ills.

The Queen Bee—Interesting Legends.

A king once had two sons who were considered clever; yet they wasted their time and money in folly and dissipation, and were scarcely ever at home. They had a younger brother whom they called stupid, because he was quiet and simple, and they used to make sport, and mock him, and say that such a simpleton as he would never fight his way through the world, for they, with all their cleverness, found it a very difficult matter.

One evening, however, they took him for a walk with them, and on their way they met with an ant hill, and the two elder brothers wanted to overturn the hill, that they might see the little ants running and creeping about in their fright, and carrying their eggs away to a place of safety. But the simpleton said: "No, no; leave the little creatures in peace. I do not like to see them disturbed."

The brothers gave way to him, and they went on quietly till they came to a lake on which a large number of ducks were swimming, and the brothers wished to catch one or two for roasting; but the simpleton said: "Leave the poor birds in peace; I cannot endure that you should kill any of them."

So the ducks were left to live, and the three brothers walked on again, until at length they came to a bees' nest in a tree, with so much honey that it ran over on the trunk. The two brothers wanted to light a fire under the tree to smother the bees, that they might take away the honey; but the younger brother held them back. "Leave the poor insects in peace," he said; "I cannot bear to think of their being burnt."

Again they listened to him, stupid as they thought him, and the three brothers walked on until they came to a castle where in the stables stood horses of pure stone. They went all over the rooms and through the castle until they reached a door to which were three locks. The center of this door was glass, through which one could see into the room. They looked and saw a very old man sitting at a table. They called him more than once, but he did not hear until they called a third time. Then he rose up, opened the three locks, and came out. Even then he uttered not a word, but led them to a richly prepared table, and after they had eaten and drank as much as they wished, he allowed them to remain all night and sleep in his own chamber.

The next morning the gray old man came to the eldest brother, made signs to him to follow, and led him to a stone table, on which were engraved three sentences, the first in the following words:

"In the wood under the moss are scattered the pearls of the king's daughter; they are 1,000 in number, and whoever can find them all in one day before the sun goes down, will release the castle from its enchantment; but if he should search and not succeed before sunset, he will be turned into stone."

The eldest brother read these words, and determined to try. He searched for the whole day, but when the hour of sunset arrived, he had only found 100 pearls, and, according to the writing on the table, he was turned into stone.

Notwithstanding this, the second brother made an attempt, and began his task in the evening, so that he searched all night, but with very little more success than his brother. By sunset next day he had only found 200 pearls; he was therefore turned into stone.

At last came the turn of the simpleton to seek among the moss; but he had no confidence in himself, and he was so miserable at having to find the pearls, that he went quite reluctantly, and when he reached the place, sat down on a stone and wept. As he sat there weeping, he saw coming toward him the ant king, whose kingdom and life he had saved, with thousand of his ants, and it was not long before they had found all the pearls, and piled them up in a large heap. Then they went home, scarcely waiting for his thanks; they had only intended to show their gratitude.

The poor simpleton was quite overjoyed; but on returning to the castle he found the second task awaiting him. It was to fetch the key of the princess' sleeping chamber from the bottom of the lake into which it had been thrown. So the simpleton went to the shore of the lake, wondering what he should do. But the ducks knew him in a moment, and were ready to help him, because he had saved their lives, and asked what he wanted. No sooner had he told them than they dived to the bottom, and in a few moments brought up the key and gave it to him.

There was still another task to perform, and the most difficult of all. He had to go into the room where the king's three daughters were sleeping, find out which was the youngest, and the most beloved, and wake her.

The sisters exactly resembled each other; the only thing by which they could be distinguished was that before they went to sleep, the eldest had eaten barley-sugar, the second a little syrup, and the youngest a spoonful of honey.

But in the midst of the youth's trouble and wonder how he should find out which was the youngest daughter, in came the queen-bee whose community he had saved from the fire, and she went to the mouths of the three sleepers and quickly discovered by the breath of the youngest that she had eaten honey. She remained on her mouth, and the youth knew by this which of the king's daughters to awaken. No sooner had he done so than the castle was disenchanted, and all who had been turned to stone resumed their proper forms.

The simple brother married the youngest daughter of the king, and became king after her father's death. His brothers married her two sisters. After all, it was better to be simple and kind hearted than clever and cruel.

◆

Putting Bees into Winter Quarters.

November is usually the month that the severe weather of the Winter season commences. When it once gets cold and has the appearance of remaining so, then it is time to put the bees into Winter quarters, and not before.

It is a mistake to put them in special Winter repositories when the first temporary cold weather is experienced, as they soon get uneasy if it becomes warm; and it is advantageous to have them fly as late as possible.

When putting bees into the bee-house or cellar, they should be prepared just the same as those out of doors, except the packing. Use carpet or duck for covering the frames.

If any are short of stores yet, fill an empty comb with syrup and place it in the hive. This can be done in pretty cold weather and disturbs the bees but little.

The colonies left on the summer stands should have some kind of wind-break. If possible, the apiary should be provided with a high tight board fence.

In removing the bees from their summer stands they should be handled carefully, and it must be cold enough to keep the bees from flying.—*Indiana Farmer.*

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Nov. 19, 20.—Northwestern, at Chicago, Ills.
W. Z. Hutchinson Sec. Flint Mich.

Dec. 2, 3.—Eastern Iowa, at DeWitte.
Frank Coverdale, Sec., Welton, Iowa.

Dec. 8, 11.—North American, at Albany, N. Y.
C. P. Dadant, Sec., Hamilton, Ills.

Dec. 16, 17—Illinois State, at Springfield.
Jas. A. Stone, Sec., Bradfordton, Ills.

Dec. 31.—Michigan State, at Grand Rapids.
Geo. E. Hilton, Sec., Fremont, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

North American Bee-Keepers' Association

President—P. H. Elwood....Starkville, N. Y
Secretary—C. P. Dadant......Hamilton, Ills.

◆

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y and Manager—T. G. Newman, Chicago.

Bee and Honey Gossip.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Bees Unprofitable.

Bees have not done well here this year. Mine are nearly all dead. I thought for awhile it was foul-brood, but now I think that it has been caused by the loss of queens from old age, as we have had very few swarms for two years, having had unfavorable weather in the Spring, each year. There are so few honey-producing plants here that the zeal of bee-keepers will cool off sooner or later. J. M. McDaniel.

Peoria, Tex.

◆

Introducing Old Virgin Queens.

Breeders of queens have advertised virgin queens for sale during the past season, and no doubt many of them have been sent out all over the country. It occurs to me that it would be interesting to have reports through the American Bee Journal as to what success has been met with in the introduction of these "old virgins" received through the mails, following the directions sent with the queens. I will begin the reports by saying that I have received two, and lost both by following, to a dot, the directions sent with them. But I can safely introduce such virgins by the use of the nursery, and all sealed hatching brood. G. W. Demaree.

Christiansburg, Ky.

◆

Uniting Weak Colonies—Feeding.

1. What are the proper quantities of sugar and water for feeding bees? 2. What is the best method of mixing 2 weak colonies of bees, to make one out of them. E. H. Murphy.

Mananah, Minn.

[1. For feeding the bees in the Fall for Winter stores, take 3 pounds of Coffee A sugar and 1 pint of boiling water. Simmer 5 minutes.

2. Sprinkle the frames and bees with sweetened peppermint water, or smoke them well, so as to confuse the "scent." Then remove one of the queens, and alternate the frames. Examine them after about 20 or 30 minutes to see if they are peaceable. If not, repeat the dose of smoke or peppermint water until they are quiet.—Ed.]

A Busy Doctor.

I have done very little writing during the past three months, and have neglected almost everything in order to care for the sick. We have had a very fatal form of typhoid fever here this Fall, and again I have been called upon to treat this class of cases. So far I have not lost a case, and have at this time only one case on hand, which is steadily improving. The good old American Bee Journal comes as regular as ever, and is appreciated. Eleven years have I read its pages, and it grows instructive and entertaining with the lapse of time. May you stand at its head yet many years to guide its course.

G. L. Tinker.

New Philadelphia, Ohio.

Cappings of the Honey.

Mr. Wander, on page 533, has "wandered" considerably. I did not claim that Italian bees built finer comb than the black bees. I claim that the honey they gather is clear at times when the honey gathered by the black bees is dark, but at times the honey gathered by the black bees is clear, and they cap it white and nice. The reason that the capping of honey by the Italians is the color of the honey is, that they fill their cells chock full, while the blacks do not fill their cells more than about ¾ full, and then place a nice white capping on them. J. H. Berry.

Gale's Creek, Oreg.

◆

Amusing Boom.

We are much amused at the booming of the so-called "Punic bees," in America. I am pretty well acquainted with the bees of Northern Africa, but do not know of such a race as "Punic;" nor is there such a species as *Apis niger* known to entomologists.

T. W. Cowan.

London, England, Oct. 1, 1891.

Gratifying Report.

I had one colony of bees in the Spring. From it I obtained 14 swarms, and 127 pounds of honey in the comb. Can any one beat this record? H. Denison.

Stoddard, Wis., Nov. 3, 1891.

Bees at the Massachusetts Fair.

Our fair has closed, and the copies of the American Bee Journal were distributed. I thinks fairs generally are not conducted by the proper persons, nor in a suitable manner. I took pains to noise it around the shire towns, and the bee-keepers flocked in. I had no idea that there were so many. I rather think that the Journal I gave them was the first of the kind they had seen. I had honey in boxes and jars, a full hive, combs with queen-cells in various stages, foundation in its changes to full comb, pure beeswax in convenient junks, bee-escapes of three kinds, queen-cell protectors, and if I had room I should have had my honey extractor, also my wax. Sidney A. Fisher.

Boston, Mass., Nov. 2, 1891.

When Writing a letter be sure to sign it. Too often we get letters with the name of the post-office, but no County or State. One such came recently, and we looked into the Postal Guide and found there were places by that name in 13 States. Be sure to stamp your letter, or it may go to the dead letter office, in Washington, D. C.

The Merry Hum of Bees.

ROSALINE E. JONES.

As some sweet scrap of an old poem strays
Back from oblivion and gladdens me,
So steals upon my heart the memory
Of you and the old days.

An echo echoes back a song unheard,
Telling unwritten romances to me:
Idylls unsyllabled in poetry.
Of dates uncalendared.

A-maytime lilac blooms and hum of bees,
And birds' and breezes' myriad carolings,
And all the springtime's fugitive sweet things,
Commingling ecstasies

That once we shared, but ne'er again shall know,
Save in the vague, mysterious realm of dreams,
Where heart keeps sacred tryst with heart, and seems
Threading the long ago.

Today I know not where your footsteps wend;
The world is large; our ways, meandering
However deviously, yet never bring
Our paths to the same end.

Where'er you face your way winds to the heights
Beyond my reach, I keep the valley path,
And glean the sweet late summer's aftermath,
Fragrant with dear delights

That you would scarce count worth your gathering;
You, who must win upon your upland ways,
A hero's laurels and a poet's lays;
Yet, while I try to sing,

I wonder if, perchance, some fledgling song
Of mine may, one day, fluttering tremulously,
Warble in love spun lays ecstatically,
The words unvoiced so long,

And reach your heart, like a dove messenger,
And rouse regret and waken memory—
That song should be my dearest song to me,
My heart's interpreter.

Sometimes I think of you as one who passed
Beyond the shadows to a bourne unknown,
And then I dream you are my very own,
My very own at last.

In the dream realm there are no laws, forsooth,
And happily, lest in some wilding mood
The vagrant dreamer should o'erbend its code,
Or break it without ruth.

But from the trysting place in fairy lands,
The dreamer's yearning heart no trophy brings;
Not e'en the memory of a kiss that clings,
Or touch of loving hands.

And so I joy in thus remembering yet,
And sending after you this raveled strand
Of song, half honey sweet with memory and
Half bitter with regret.

Come to the Chicago feast, on Nov. 19.

Wavelets of News.

Uniting Colonies.

If I had small colonies that wished to unite, I would move them together, and let them get well established in their new location before disturbing them. I would move them in the evening, after all the workers had returned from the fields, and put grass or straw in front of the hive entrance, so that they could not leave as usual; a board in front, to bump their heads against, will cause them to notice a cange in their location, and take their bearings.

When established in their new home, I would remove all their queens but one, and cage them, choosing the best one to remain with the colony.

When wanted to unite them, I would remove the hives from their old stand, and place a new hive in the center of the place where they stood, placing a smooth board in front of it to brush the bees upon. Then I would remove the frames containing brood from all the hives, brush off all the bees, and put the frames promiscuously into the new hive, and pour all the bees together in front of it, and drive the bees into it with smoke.

As neither of the colonies can lay claim to this home, they accept the conditions, and unite peaceably.—*Exchange.*

When to Put Bees in the Cellar.

Many suppose it better to leave them out as long as possible—say, until the holidays. I do not concur. With bees, as with other animals, hardships do not harden them. It does not pay to leave an animal out until it is "Spring poor" before you stable it. Neither does it pay to leave the bees out after the warm days have gone. They eat more outside, and this is the very thing we wish to avoid, both on account of economy, and health of the bees.

If you could put them into a repository of just the right temperature, and if it could be maintained from Oct. 15 to April 15 at so nearly what the bees require, that they would consume not to exceed ten pounds per colony for the six months, I should say it was economy to house early.

I have been in the habit of commencing to carry mine in in the latter part of October, and usually finish in November, but have sometimes taken the last in as late as Christmas. I find the ones carried in first in as good condition in the Spring (and they are always the last one out), after a confinement of six months, as the colonies taken in later with a confinement of only four months.

After the honey season is over, and the nights get cool, you will notice how sluggish the bees become. Now if put into winter quarters in that condition of sluggishness, and kept in such a state, they will endure a longer confinement than many suppose. It is activity that wears the bee out. The greater her activity, the shorter her life.—EUGENE SECOR, in the *Farmer and Breeder*.

Look Out for Mice and Rats.

Unless the hive entrances are arranged so as to keep out mice, they will often build nests in them as soon as cold weather begins, thus doing great damage. A good way to prevent this is to tack a piece of stout wire-cloth over the entrance, the meshes of which are large enough to allow the bees to pass through freely.

When the bees are housed for Winter do not neglect to lay some poison in the cellar, or winter repository, to destroy rats and mice.

If some porous material is used for covering the brood-frames, upward or top ventilation is not needed, either for out or in-door wintering.

Entrances should open the whole width for in-door wintering, provided the temperature is kept above freezing. For out-door wintering the entrances should be contracted to a small opening when exposed to the cold Winter blasts, and also windbreak provided.

A good deal has been said about sub-ventilation to bee-cellars. I have tried it, and with many others have concluded that such ventilation is not needed. I have found that upward ventilation will keep the air pure, and also regulate the temperature. The part of the cellar where the stairs enter is partitioned off so that no light can get to the bees when the trap door is open.

In cold weather I heat the room above to regulate temperature in the cellar. I try to keep the temperature about 40°. If the cellar is damp the temperature should not go below 50°, and 60° would do no harm. With a dry cellar, however, this temperature would be rather high, unless the bees' Winter stores consist of honey which will keep liquid all Winter, and contains the right proportion of water.

If, however, the honey is very thick, or, what is worse, granulated, the bees should have water in some way, or they will suffer. This is the reason why I do not like cemented floors for a bee-cellar. I want a cellar that has a warm, humid atmosphere, so that the honey, by absorbing moisture from the air, will keep in a natural condition.

There is no trouble about the honey getting sour in such a cellar as long as strong colonies are wintered, or no more combs are left them than they can well cover.

These directions for wintering, it should be remembered, are for sections where the Winters are not warmer than Central New York.—JULIUS HOFFMAN, in *Farm and Home*.

We Club the American Bee Journal and the Illustrated Home Journal, one year for $1.35. Both of these and Gleanings in Bee Culture, for one year, for $2.15.

Convention Notices.

☞ The Michigan State Bee-Keepers' Association will meet in Grand Rapids, Mich., on Thursday, Dec. 31, 1891, and Friday, Jan. 1, 1892. GEO. E. HILTON, Sec., Fremont, Mich.

☞ The Illinois State Bee-Keepers' Association will meet in Springfield, Ills., on Wednesday and Thursday, Dec. 16 and 17, 1891.
JAS. A. STONE, Sec., Bradfordton, Ills.

☞ The Eastern Iowa Bee-Keepers' Association will meet in De Witt, Iowa, on Wednesday and Thursday, Dec. 2 and 3, 1891.
FRANK COVERDALE, Sec., Welton, Iowa.

☞ The Northwestern Bee-Keepers' Society will hold its annual convention at the Commercial Hotel, corner of Lake and Dearborn Streets, in Chicago, Ills., on Thursday and Friday, Nov. 19 and 20, at 9 a.m. Arrangements have been made with the Hotel for back room, one bed, two persons, $1.75 per day, each; front room, $2.00 per day for each person. This date occurs during the Fat Stock Show, when excursion rates on the railroads will be one fare for the round-trip.
W. Z. HUTCHINSON, Sec., Flint, Mich.

☞ The North American Bee-Keepers' Association will hold its annual convention in the Agricultural Hall, at Albany, N. Y., from Dec. 8 to 11, 1891. The hotel reduced terms are as follows: Globe Hotel, $2 per day; American Hotel, $2; Cox Brothers, No. 4 William st., $1; W. H. Keeler, 488 Broadway, European plan, rooms 50 cts., 75 cts., and $1; Kimbal House, 69 Washington st., $1; Merchants Hotel, 497 Broadway, $2; I. Keeler, restaurant, 56 State st.; Odel Restaurant, 94 State st. Reduced railroad rates have been secured from Chicago and the Mississippi River and from the South. Every local and State association should send one or more delegates. Those who intend to be present should send their names either to the President or Secretary. The programme will be issued soon, giving all particulars.
P. H. ELWOOD, Pres., Starkville, N. Y.
C. P. DADANT, Sec., Hamilton, Ills.

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☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

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☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

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We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
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Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The 7 above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
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Farm, Field and Stockman	2 00	1 75
Prairie Farmer	2 00	1 75
Illustrated Home Journal	1 50	1 35
American Garden	2 50	2 00
Rural New Yorker	2 50	2 00
Nebraska Bee-Keeper	1 50	1 35

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

◆

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

◆

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

◆

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

YOU NEED an Apiary Register, and should keep it posted up, so as to be able to know all about any colony of bees in your yard at a moment's notice. It devotes two pages to every colony. You can get one large enough for 50 colonies for a dollar, bound in full leather and postage paid. Send for one before you forget it, and put it to a good use. Let it contain all that you will want to know about your bees—including a cash account. We will send you one large enough for 100 colonies for $1.25; or for 200 colonies for $1.50. *Order one now.*

◆

The Bee-Keepers' Directory, by Henry Alley, Wenham, Mass. It contains his method for rearing queens in full colonies, while a fertile queen has possession of the combs. Price by mail, 50 cents.

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If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00. For sale at this office.

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Well Pleased.

The October number of the HOME JOURNAL came duly, also the premium of $2.00 in cash, for which please accept my thanks. I shall be pleased to answer any inquiries concerning your honorable dealings with me.

Belleville, Pa. KATE M. BOYER.

[Enclose an addressed postal card for reply.—ED.]

◆

Pleasant Surprise.

Your draft for $2.00 as a premium for answer to the rebus came to hand to-day, and was a pleasant surprise. On account of the distance from Chicago I feared that I could not get the answer to you in time to be on the first list of names, so that I might obtain the prize. I hope to be as well or better pleased with the perusal of the ILLUSTRATED HOME JOURNAL in my leisure hours.

P. S. GRINDLE.

Brooklyn, Ala., Oct. 29, 1891.

◆

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HONEY AND BEESWAX MARKET.

NEW YORK, Nov. 6.—Demand is limited, and supply sufficient. We quote: Comb—Fancy white, 1-lb., 14@15c; 2-lb., 12@13c; off grades, 1-lb., 12@13c; 2-lb., 11@12c; buckwheat, 1-lb., 10@11c; 2-lb., 9c. Extracted—Basswood, white clover and California, 6¾@7c; orange bloom, 7@7½c; Southern, 60@70c ⅌ gal., as to quality. Beeswax, steady, 25@27c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, Nov. 7.—The demand and supply are fair. We quote: White comb, 1lb., 15@16c; dark, 10@12c. Extracted—White, 7c; dark, 5@6c. Beeswax, is in light supply, and demand good, at 23@26c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Nov. 7.—The demand is slow, with good supply, except choice comb. We quote: Choice white comb, 14@16c. Extracted, 5@8c. Beeswax is in good supply and fair demand, at 23@25c for good to choice yellow.
C. F. MUTH & SON,
Cor. Freeman & Central Aves.

NEW YORK, Nov. 6.—Demand for honey is fair, with adequate supply; buckwheat not so plentiful as clover. We quote: Fancy clover, 14@15c; fair, 1℔., 12@13c; buckwheat, 10c. Extracted, 7@7¼c. Beeswax, in fair demand, with adequate supply, at 25@27c.
CHAS. ISRAEL & BROS., 110 Hudson St.

CHICAGO, Nov. 7.—The demand is good for fancy white comb-honey, in 1-℔. sections, at 16c; other grades white, 14@15c. Extracted honey selling slowly, owing to warm weather. We quote it at 6½@7½c. Beeswax, in light supply and good demand, at 26@27c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Nov. 7.—Demand is good, with comb in fair and extracted in light supply. We quote: Comb—1-lb. fancy, 15@16c; dark, 12c. Extracted—White, 7@7½c; dark, 5@6c. Beeswax—None in market.
HAMBLIN & BEARSS, 514 Walnut St.

DETROIT, Nov. 7.—The demand for comb-honey is fair and supply small. We quote: Comb, 12@13c; extracted, 7@8c. Beeswax in good supply, and light demand, at 25@26c.
M. H. HUNT, Bell Branch, Mich.

CHICAGO, Nov. 7.—Demand is good and supply small of gilt-edged stock. We quote: Choice white comb, 14@16c. Extracted, 6@8c. Beeswax, in light supply, and good demand, at 26@27c. J. A. LAMON, 44-46 S. Water St.

MILWAUKEE, Nov. 6.—Demand not very brisk; supply good, and of better quality. We quote: Comb—choice, 1-lb., 15@16c; fair, 13@14c; dark, 10@12c. Extracted—white, in barrels or kegs, 7@7½c; dark, 6@6½c. Beeswax, 25@28c.
A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO, Nov. 2.—Demand good, supply small. We quote: Comb, 1-lb., 10@13c. Extracted, 5¾@6c. Beeswax, in light supply and good demand, at 24@25c.
SCHACHT, LEMCKE & STEINER,
16 Drumm Street.

NEW YORK, Nov. 6.—Demand is moderate, and supply reduced, with no more glassed 1-℔ nor paper cartons, 1-℔. We quote: Comb, 1-℔, 14@15c. Extracted—Basswood, 7¼@7½c; buckwheat, 5½@6¼; Mangrove, 68@75c per gal. Good demand for dark extracted honey. Beeswax, in fair supply, with small demand, at 26@27c.
F. G. STROHMEYER & CO., 122 Water St.

CHICAGO, Nov. 7.—Demand is now good, supply is not heavy. We quote: Comb, best grades, 15@16c. Extracted, 6@8c. Beeswax, 26@27c.
R. A. BURNETT, 161 S. Water St.

BOSTON, Nov. 6.—Demand is good, supply ample. We quote: 1-℔. fancy white comb, 15@16c; extracted, 7@9c. Beeswax, none in market.
BLAKE & RIPLEY, 57 Chatham St.

ALBANY, N. Y., Nov. 6.—Demand good, and the supply liberal. We quote: White comb, 14@16c. Extracted—White, 7½@8½c; dark, 6@6½c. Beeswax, supply light, and demand good at 28@30c.
H. R. WRIGHT, 326-328 Broadway.

NEW YORK, Nov. 6.—Demand active, and supply increasing by large arrivals. We quote: Fancy 1-lb. comb, 14@17c, depending on quality; 2-℔. sections, 2c less. Extracted—White clover and basswood, 6@8c, and supply not equal to the demand. Beeswax—the supply is not equal to the demand, which is brisk, at 26@29c, as to quality.
F. I. SAGE & SON, 183 Reade St.

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Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line,** for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

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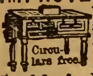
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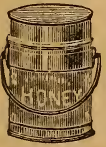

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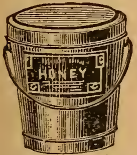
Gallon,..holds 10 lbs	$1.80	$12.00
½-Gallon, holds 5 lbs.	1.50	9.00
Quart, holds 3 lbs	1.20	7.00



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To hold	1-lb.	4-lbs.	7-lbs.	13-lbs.	25-lbs.
Per dozen,	$ .75	$1.25	$ 1.50	$ 2.00	$ 3.25
Per 100,	5.00	8.00	10.00	14.50	23.00

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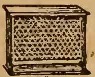

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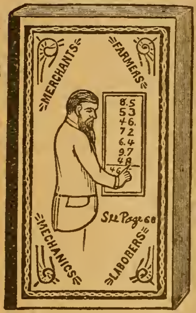

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THOMAS G. NEWMAN,
EDITOR.

Vol. XXVIII. Nov. 19, 1891. No. 21.

Editorial Buzzings.

The World is a crowded 'bus;
A few good men, perhaps,
May get a seat, the rest of us
Must hold on by the straps.

The National Flower was voted for at the Flower Show in Chicago last week. When the box was opened it was found that out of the 899 votes cast, 457 was for the bee's favorite—the golden-rod—and the rest were scattering. The golden-rod was an overwhelming favorite. "It grows everywhere," said one lady when she voted, "and is the typical American flower. It makes itself at home anywhere, in the gardens of the rich and poor alike, and its growth is so rapid, and it attains magnificence so soon that it is more emblematic of America than any other flower in the world." The voting continues through this week.

Another patent has just been issued on a bee-hive. It is dated Nov. 10, 1891, and was given to Reuben H. Ewing, of Iowa. It is the old story—a moth-proof hive—worthless and useless, with not a new feature in it. Here is the claim of the so-called invention:

> The bee-hive A, having a horizontal bottom B, with the central hole *b*, just large enough to allow the bees to pass through it, and an upwardly-convex bottom C, whose oppositely-inclined sides meet in a vertex *c*, directly under the said hole, and just far enough therefrom to permit the bees to reach the hole, the said hive being provided with opposite entrances *c′ c′* for the bees and moths between said bottoms, as shown and described.

The inventor does not even know the sex of worker bees, as will be seen by the following from the specifications, where it is called *he* every time.

> The tendency of the bee is to move upwardly, and as soon as he reaches the vertex *c* he will make for the entrance *b*, while the moth will travel up one side of the bottom C, and down the other, thereby failing to get into the honey or bee chambers at all, not being able to reach the hole *b*, even if inclined to do so.

What a *pity* it is to fool away good money for such a worthless patent!

What *stupidity* it is to maintain a lot of useless "examiners" to approve of inventions the practical workings of which they know nothing about!

What *dishonesty* it is to grant patents, over and over again, to different persons on precisely the same thing!

What *robbery* it is to take the money of the credulous inventor and render no equivalent for it!

In this case the patentee has sold one-half of the "invention" in advance, to secure the money to get a patent, which, for practical purposes, is not worth the paper it is printed upon! Bah!

To Granulate Honey a correspondent advises to churn it, as you do cream to make butter. This will produce a fine grain in a few minutes.

Bee Lawsuit in England.—Another disagreeable neighbor has caused a lawsuit. This time it is located in England, and the bee-keeper was at fault for not keeping the swarm of bees in sight, so as to be able to identify them. The swarm settled in a neighbor's garden, and he forbade the owner of the bees to secure and hive them. He also amused himself by throwing stones at the swarm, as it hung on the gooseberry bush, and finally drove it away.

The case was Charles Brooks *v.* Thomas McArthur, and was tried at the Marlborough County Court, on Oct. 13, 1891, before Judge Caillard and Registrar Merriman. Here is what the *British Bee Journal* reports concerning the matter:

In this case the plaintiff, who lives at Cadley, sought to recover 10*s*. from the defendant, a neighbor, for the loss of a swarm of bees which flew into his garden.

According to the evidence given at the last court by the plaintiff's wife, an immense swarm of bees came out of her husband's hive, in their garden, and flew over some buildings into the defendant's garden. She followed the bees, and did not cease ringing to them.

As soon as they began to pitch on a gooseberry bush, the defendant threw stones and a bucket at them. She was standing just outside the defendant's gate at the time. The defendant fastened up his gate and forbade her coming on to his ground. He began throwing at the bees again.

Then—and this was important, his Honor said—they settled again on the same gooseberry bush, after which Mrs. Brooks went in-doors for some time, thereby losing sight of them for a considerable time. When she came out again, they were gone. From the evidence it appeared she lost sight of them for two hours before she came out.

To show the law on the matter, his Honor read the following extract from *Blackstone's Commentaries:*

"Bees are *feræ naturæ;* but, when hived and reclaimed, a man may have a qualified property in them, by the law of nature, as well as by the civil law. And to the same purpose, not to say the same words with the civil law, speaks Bracton: occupation—that is, hiving or including them—gives the property in bees; for, though a swarm lights upon my tree, I have no more property in them, until I have hived them, than I have in the birds which make their nest thereon; and, therefore, if another hives them, he shall be their proprietor; but a swarm which fly from and out of my hive are mine so long as I can keep them in sight, and have power to pursue them; and in these circumstances no one else is entitled to take them. But it has also been said that with us the only ownership in bees is *ratione foli;* and the charter of the forest, which allows every freeman to be entitled to the honey found within his own woods, affords great countenance to this doctrine, that a qualified property may be had in bees, in consideration of the property of the soil whereon they were found."

The Judge said he had not been able to find any other authority. Therefore, the leading principle to be kept in view as regarded the plaintiff's right to have this swarm of bees, was that he or his wife should not have lost sight of them.

Although there was some ill-natured and unneighborly conduct on the part of the defendant, there was nothing to prevent the plaintiff's wife from steadily keeping the bees in sight after they again settled upon the gooseberry bush. However, she went away for two hours, and lost sight of them. When she came back, the bees were gone. What became of them did not appear. Somebody else must have had the benefit of the swarm.

He thought plaintiff was not entitled to recover. The order of the court was that there be a non-suit, without costs.

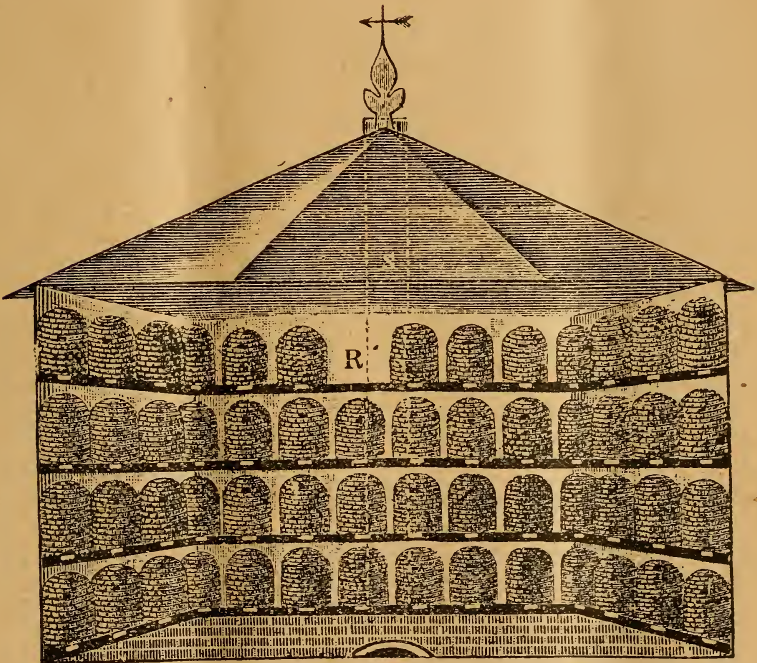
* * *

The Wintering Problem in Bee-Keeping; an Exposition of the Conditions Essential to Success in the Winter and Spring Management of the Apiary, by G. R. Pierce. This is the title of a new pamphlet of 77 pages, lately issued by the author, who has had 25 years' experience in bee-keeping, and for the past 5 years has devoted all his time and energies to the pursuit. Price, 50 cents. For sale at this office.

* * *

Granulated Honey in bulk may be best reliquefied for bottling by giving the cans a hot water bath, or by heating over steam pipes.

Plans for Bee-Houses by Josef. Kach. This is an illustrated pamphlet of 28 pages and cover, published by C. A. Schwetschke & Son, Braunschweig, Germany. There are plans and specifications for 21 different kinds of bee-houses, winter repositories, etc., and these are illustrated by 35 engravings. It is beautifully printed in German on good paper, and our German apiarists should each procure a copy. Price, one mark. Send to Germany for it.



HOUSE-APIARY IN GERMANY.

An Indiana Apiary was thus written up by a reporter for the Indianapolis *Journal* of last week :

The golden Autumn sunlight and rustle of falling leaves were all about a little wooden building that stands meekly among its more pretentious neighbors on East Walnut Street. There was no sign of life about the place when the writer peered through its tiny windows; even the street was deserted without. Over the door a sign swung softly to and fro in the crisp breeze, apparently crooning itself to sleep with a soft, creaking sound that kept time with the motion. It was old, worn, and meek looking, and one must get to the leeward side to read, where the weather as yet had failed to obliterate the single word, "Bees."

Standing in the middle of the sun-flecked floor, musing over the picture of a rosy-cheeked boy on a hard bench in a stuffy school-room, and a booming bumble-bee gorging upon a big blossom in the center of a clover field, the reporter had not noticed the entrance of a tall young man who knew all about bees, honey, and beeswax. This was Mr. Walter S. Pouder, and in the short time the reporter spent in his cozy little place, showed himself to be a thorough master of the apiary.

"My bees are all at rest now, but I shall be very glad to exhibit the inside of a hive, though it is a trifle dangerous at this season of the year, the bees, becoming cold, also become very ugly." That offer was declined with agility.

"Now," he continued, "I will show you a queen bee of Italian breed, which will begin a journey of over 5,000 miles to-night in regal style. She will be attended by nine of her subjects. They will watch her carefully, too, seeing that she is well fed at regular intervals with soft candy, while, upon her arrival at Melbourne, Australia, they will at once begin to build her a home and furnish it with waxen floors and walls.

"This is the state carriage, and here is the queen." Suiting action to word, the bee-keeper pulled forth a small wooden box not larger than a vest pocket match-safe. This was the state carriage. Over the entrance a fine wire screen covers the royal chamber, while further back a connecting passage gives entrance to the apartment reserved for the attendants, nine 'working' bees, while directly in the rear of this the store room, in which the food for the journey, in the form of a soft candy ball, is jealously guarded.

Usually the queen and party arrive safe, but at times a monster in size of everything but his capacity to understand that the business end of a bee requires to be left strictly alone, pushes a lead-pencil through the wire-netted door, and begins an investigation to satisfy his giantship's curiosity about buzzing sounds. He is called a postal clerk, and is feared by both bees and bee-keepers wherever they are found.

◆

The Chinese are very fond of honey, and Madam Madare gives some very interesting details in the *Bulletin de la Societe d' Apiculteur de la Somme*, concerning the Chinese bee-keepers, and really the Chinese are not as ignorant about bees as many suppose them to be. She says that "they hang their hive (generally they only have one) to the roof of their house. This hive is a bamboo cylinder, closed at both ends with earth. When they want to take honey, they smoke their hive the same as is done elsewhere. They then open it, and take out several combs of honey, and then close it. But, like real savages, they are very fond of the small white larvæ, which are found in the cells. They feast with delight on these. If they are stung, they crush some of these larvæ and apply them to the part, and this simple remedy prevents the swelling which is frequently so painful."

The Industry of bee-keeping is now recognized at headquarters. The Department of Agriculture at Washington have taken hold of it in earnest, and propose to gather the many tons of honey now going to waste all over the continent. The Department proposes to interest each farmer in the pursuit, but we fear it will take many ages to have the average farmer learn to manage bees so as to make them a source of profit, and to take away their fear of stings. The Washington *Star* of last week contained the following, accompanied by a valuable lesson on the nature and habits of bees, which shows that it was written by one who is well-posted on the matter. It reads thus:

The Department of Agriculture has recently added to its scientific staff an expert in bees. Secretary Rusk is of the opinion that the keeping of these insects might be made a vastly more profitable industry in the United States than it now is. It is estimated that bees in this country produce a value of $10,000,000 yearly in the shape of honey and wax. This could be multiplied by ten without much difficulty. First, however, the farmers must be taught the art of bee-culture, and this is precisely what it is proposed shall be attempted.

Next year a plant will be established for the purpose by the division of entomology, and experiments will be made with methods for caring for bees. Also, it will be ascertained which of the various races are best adapted to the climate, and a study will be made of their diseases. Possibly Dr. Benton, the expert referred to, will be sent abroad to get other varieties. Of course, there were no honey-bees on this continent until the white man brought them hither from the Old World.

There has been a great controversy for years past between the fruit-growers and the bee-keepers over the question whether bees destroy fruits by cutting them open. Bees are often seen in the act of sucking the juices of fruits, but, as a matter of fact, it is always wasps that cut the skin, and the bees subsequently drive away the wasps for the sake of getting at the juices. Thus the bees have got a bad name through a very natural mistake, while, in truth, if it were not for their assistance in fertilizing the blossoms, hardly any fruit would grow and ripen.

Apicultural Statistics are always interesting to bee-keepers. Here are some statistics from a late issue of the Los Angeles, Calif., *Times*, which are doubly interesting in the light of the attack of Mr. Fleischmann, in a German bee-periodical which was given in full on page 623 of the BEE JOURNAL for last week. The *Times* remarks thus:

> Nothing could demonstrate the remarkable adaptability of California to the successful production of honey so much as the fact that in less than 40 years this State has become the leading honey producer of the Union.
>
> When the first American settlers came to this Coast, such a thing as a bee was absolutely unknown. There was not one in the entire State.
>
> The first bees were introduced into California via the Isthmus route. Four colonies comprised the entire shipment, and when they reached their destination they were valued at $400 each. By swarming and judicious sub-division their number was rapidly increased, and the price diminished in proportion, though for a long time $50 was the regular price for a single colony.
>
> Last year, the two leading counties, Los Angeles and San Diego, shipped, as nearly as can be learned from the reports of railroad companies and steamship lines, upward of 5,000,000 pounds of honey, while the entire State did not fall short of at least 6,500,000 pounds.
>
> It is true that other and lower estimates have been made and widely published, but when actual shipments are made of nearly 5,000,000 pounds for two counties alone, it is manifestly absurd to claim that the entire output of the State did not exceed that amount.
>
> The only available statistics upon the subject are those furnished by the State Board of Equalization as collected by the County Assessors. How correct they are, may be inferred from the fact that the counties of Alameda, Amador, Humboldt, Lassen, Marin, Mariposa, Napa, Santa Cruz, Sierra, Solano, Trinity, Yolo and Yuba are not credited with a single colony of bees, while as a matter of fact there are more or less in all of them.
>
> The total number in the entire State last year is given as 55,043, of an aggregate valuation of $65,244. San Diego County comes first, with 14,947 colonies; Los Angeles is second, with 13,871; Ventura third, with 9,311: San Bernardino fourth, with 5,140; Fresno fifth, with 4,110, and Santa Barbara sixth, with 3,115. Inyo has 1,453, Kern 1,250, and Tulare 1,176. The valuation varies from 50 cents to $3.00 a colony.
>
> These figures serve only in determining the approximate relative importance of the honey-producing counties, and are not to be taken as in any sense accurate, so far as the actual number of bees is concerned.

◆

Mr. W. C. Frazier, an enterprising and skillful apiarist of Atlantic, Iowa, is to conduct an apiarian department in the *Homestead*, an old and prosperous weekly farm paper published in Des Moines, Iowa. This is another of the BEE JOURNAL family, who is to enlighten mankind on "the wonders of the bee," and the modern management of bees for pleasure and profit. There are now about 100 of the regular readers of the BEE JOURNAL who are creditably editing Bee Departments in first-class papers all over the country. We wish all of them success and prosperity. In the initial number Mr. Frazier writes thus:

> The man who disposed of his cattle two or three years ago because there was no money in them, wishes now he had them again. He that disposes of his bees will next year be in the same predicament. Keeping continually at it is what pays in the long run. We have a report of an apiary of 10 colonies, 9 of which gave no surplus, but the tenth (an early swarm) filled its hive, and also two supers—about 48 pounds.
>
> The modern apiarist would no more go back to the gum or box-hive than the horseman who has the modern barn, with all its conveniences and water pipes, would go back to the round log, old-fashioned double barn.
>
> The movable frame was a great aid to apiculture. The present tendency is to have straight combs, and to crowd them. Sealed brood is only one inch thick, and by crowding the brood-combs a little closer than the bees' naturally build them, we get more brood and less honey in the brood-chamber, and thus compel the bees to store their honey in some other place.

◆

Clubs of 5 New Subscriptions for $4.00 to any addresses. Ten for $7.50.

Antiseptics for the Cure of Foul-Brood in its Early Stages is the subject of an article in the Canadian *Live Stock and Farm Journal*, marked and sent to us (we think) by Mr. Wm. McEvoy, the Canadian Foul-Brood Inspector. It reads as follows:

In its early stages foul-brood may be cured by the use of antiseptics. These are used in weak solution, and are sprayed over the combs and mixed with the honey and syrup which are fed to the bees. The chief of the antiseptics used are known as salicylic acid, carbolic acid, formic acid, and naphthol Beta.

Salicylic acid is a powder which does not dissolve readily in water. It must first be dissolved in alcohol, or in a solution of borax and water. It is then diluted and sprayed upon the combs of brood, and mixed with syrup or honey and fed to the bees. In preparing this antiseptic, use 16 grains of salicylic acid, 16 grains of soda borax, and 1 ounce of water. One ounce of the mixture is used with 1 quart of the food, and the mixture is diluted with 50 per cent. of water when used for spraying.

When carbolic acid is used, it should be in the pure crystallized form. One ounce may be mixed with 40 pounds of syrup. It is carefully stirred into the cool syrup until well mixed, but must first be dissolved and diluted by mixing with water. As bees often refuse to take food that contains carbolic acid during the honey season, it must be sprayed over the brood when used at that season.

Formic acid, which is nearly odorless and highly antiseptic, is usually purchased as a 25 per cent. solution, as a 100 per cent. solution is somewhat dangerous to handle. A wine glassful of the former is added to each gallon of the syrup which is fed to the bees.

Naphthol Beta is a white crystalline substance obtained from the distillation of coal tar. Twenty-three grains are added to one gallon of thin syrup. As the naphthol Beta is insoluble in cold water, it must be dissolved in a mixture of hot water and alcohol.

The cure by the use of antiseptics is often ineffectual. Indeed, it is considered so unsatisfactory by some bee-keepers that they do not use these at all. Yet, in the early stages of the disease, cure may be effected by the use of antiseptics. But where the disease has made much progress, it is difficult to make a permanent cure. This is owing to infectious matter that remains latent in the hive. This matter may be "bottled up in a cell of honey or pollen, or it may remain dried up in the lining of a cell, or among the wax cappings," as stated in Bulletin No. 9, recently issued by the Rhode Island State Agricultural School.

Foul-brood is raging in Utah, as we are informed by an apiarist of that Territory. It becomes necessary to rigorously stamp it out in order to save the pursuit from annihilation.

French Bee Congress.—From the *British Bee Journal* we learn that on Sept. 2, 1891, the tenth Apiculural Congress was held in Paris, presided over by M. de Heredia, and attended by Messrs. Abbe Boyer, Vignole, and De Layens; Vice-Presidents Abbe Virnot and Lefebvre. The Secretary, M. Derosne, read the proposed statutes for the federation of the French Bee-Keepers' Societies. These statutes contained 18 rules, which were adopted by the Congress as proposed. Every affiliated society will pay, in accordance with Rule X, an annual subscription of ten francs. The object of the federation is to group the different bee-keepers' associations of France, and thus to enable them to concentrate their forces to defend their mutual interests, also to obtain from governing bodies the support and liberty necessary for this branch of agriculture. The federation to continue so long as at least three societies are affiliated.

The Pier at the World's Columbian Fair grounds, extending 1,000 feet into the lake, is already completed. At its extremity will be erected a tower 250 feet high. This will be of iron, covered with "staff," and will resemble a lighthouse in appearance. From its summit, electrical displays of exceeding brilliancy will be made, and by means of electric "search-lights," the grounds, or any particular portion of them, can be flooded with light on fete nights.

Golden-Rod in November.

D. C. SCOTT.

The ruddy sunset lies
Banked along the west,
In flocks, with sweep and rise,
The birds are going to rest.

The flaunting golden-rod
Has lost her worldly mood,
She's given herself to God,
And taken a nun's hood.

The Winter's loose somewhere,
Gathering snow for a fight;
From the feel of the air
I think it will freeze to-night.

Queries and Replies.

Ventilation in Winter Quarters.

QUERY 793.—1. For cellar wintering should the hives be ventilated at the top and bottom? 2. If so, what is the best method?—Iowa.

I would depend on bottom ventilation. —J. P. H. BROWN.

1. Only at the bottom. 2. I remove the bottom-boards.—R. L. TAYLOR.

1. No. 2. If the cellar is well ventilated, the bottom is sufficient.—MRS. L. HARRISON.

1. At the bottom only. 2. Leave the entrance wide open the whole width of the hive.—C. H. DIBBERN.

1. Yes. 2. Use chaff cushions on top, and raise the hive 2 inches all around at the bottom.—G. M. DOOLITTLE.

I have realized the best results when the quilt has been left as the bees fasten it, and with the bottom-board removed. —A. B. MASON.

I am of the firm conviction that a bee hive should never be ventilated from the top—that is, never give it any upward ventilation.—H. D. CUTTING.

1. No. 2. We pile the hives 4 high, without bottoms, and turn up the corner of the oil-cloth a little to give ventilation at the top.—DADANT & SON.

1. I have never wintered bees in a cellar, but I think they ought to have some ventilation in the top as well as the bottom. 2. The entrance should be wide open, and there should be some porous material on the frames that will let the air go through it quite slowly.—M. MAHIN.

1. At the bottom, usually. 2. If loose bottom-boards are used raise the hive and put inch strips under the ends of the hive, leaving the sides open.—EUGENE SECOR.

I never could see any difference in results, whether the hives were ventilated at all or not, provided the temperature be kept right. I do not worry about ventilation any more.—JAMES HEDDON.

I leave the covers of my hives closed tightly without upper ventilation. I have reversible bottom-boards, and in Winter there is a 2-inch space under the bottom-bars, with the entrance 12 by 2.—C. C. MILLER.

1. It depends upon how warm the cellar is in Winter. If it is a very warm cellar, ventilate at both the top and bottom of the hive. 2. Top ventilation, in cellars, is best secured through quilts or light cushions of chaff or other material.—G. L. TINKER.

1. Ventilate at the bottom. 2. At the entrance, or if a rim is put under the hive (which I think a good thing), then make a similar opening. If the opening is in the body of the hive, that will be excellent, even with the two or three inch rim under the hive.—A. J. COOK.

1. My only practical knowledge concerning cellar wintering is based on some experiments I made some Winters ago. In those experiments, in my cellar, I found that ventilation at the top of the hive was necessary to keep the bees dry. 2. A shallow super on the top of the brood-chamber so as to have a dead-air space above the cluster, is the best protection against moisture.—G. W. DEMAREE.

1. No ventilation should be given at the top; it should all be given at the entrance. 2. My bees are wintered on the summer stands with success, using a "Hill's device" on top of the frames, covered with a piece of old carpet, or its equivalent. I fill in, on top of that, 5 or 6 inches of forest leaves, loosely pressed down. This allows the excess of moisture to pass off, but does not ventilate. I give a large entrance, the whole width of a Langstroth hive, to a strong colony.—J. E. POND.

Ventilation at the entrance is usually sufficient, if that is left wide open.—THE EDITOR.

Topics of Interest.

Bee-House Above Ground.

G. M. DOOLITTLE.

The following letter asks for suggestions on the above subject:

> My bee-house is about 7x10 feet on the ground, and 7½ feet high, all inside measure, with 10 inch walls of earth, and 8 inches of earth above. The house is all above ground, and stands on a hill, exposed to heavy winds. It was built one year ago, and it does not seem to have dried through yet. I had a tough time trying to preserve 43 colonies in it last Winter. The frost got into it so badly that I lost nearly one-half of the bees. The rest came through in a very weak condition. I had to warm the bee-house with an oil-stove during the latter part of the Winter. I have 30 colonies this year to winter, and I am afraid I shall lose them. I have, this Summer, made an underground ventilator, 70 feet long, to supply air. What I want to know is, how shall I ventilate the bee-house? The underground ventilator will let warm air in, but how much air shall I let out? I am not used to wintering my bees in a bee-house. How large a tube do I need to let air out of the bee-house? I have got one ventilator on the top of the bee-house, 10 inches square, and one at the bottom of the side of the bee-house, 6 inches square, to let air out of the house. I watched them closely last Winter, and gauged the slides to these tubes carefully, changing them more than a thousand times, trying to keep the bee-house warm, but this I failed to do. Any suggestion will be thankfully received.
>
> Erie, Pa., Oct. 26, 1891. A. S.

In the first place I would say that your bee-house is too small to winter bees in; or, in other words, more bees are required together, in one place, to make wintering in a house above ground a success, than your house will hold.

It must be remembered that there is absolutely no warming principle inherent to bee-houses above ground; hence, all the heat that there can be to overcome the cold from without, must come from the bees placed inside, or from an oil-stove or something of that description. The more bees that are placed together, the greater the heat from them, and if I could not place as many as 100 colonies together, in any bee-house above ground, I should not try to depend on these bees for the necessary heat required to safely winter bees in such a place.

The only thing to be done with such a house as you describe, in order to obtain the necessary temperature, is to provide some means of artificial heat, and for this purpose an oil-stove will be as good as anything, provided you can adopt some means to keep the light from it from annoying the bees, and also provide some way for carrying the offensive odor out of the room, that always arises from such a stove. If it were for only a short time, this foul odor might not do much harm, but when it comes to confining bees to such a state of affairs for all Winter, I am satisfied from the experience of the past, that it destroys very much of the vitality of those bees which do not succumb to it entirely.

To help in this matter of heat, or fix your house so that it will longer retain the heat generated inside, you can "jacket" the outside, so as to nearly or quite double the retaining quality of it, by simply nailing inch strips over the present outside covering, and then re-siding the building. As you nail on the new siding, fill in the inch space with fine cut straw or chaff, and put from four to six inches of chaff over the ceiling you now have; also underneath, if possible.

This will not only retain the heat generated by the bees and stove much more effectually, but what is of more importance, guard against a too rapid change of temperature, which is most disastrous where bees are wintered indoors.

Where bees are wintered inside, there should not be a greater change in temperature than 5°, if it is possible to avoid it. My bee cellar does not vary more than 3° during the whole Winter, when we have the most unfavorable Winters, and in some of the most favorable seasons it has varied only 1°, after the bees had become quieted down from the disturbance consequence upon moving them.

If you cannot arrange so as to keep the temperature of the bee-house so that it will not go lower than 40°, and not higher than 45°, I should advise you not to put the bees into that bee-house at all. I would much prefer to risk wintering out-doors than to take the risk of a winter repository in which I could not control the temperature as above stated.

There seems to be something about a fluctuating or cold temperature, while bees are in a repository, which is very disastrous to the bees confined therein, and all who have tried such a temperature agree that it is never, under any circumstances, a success.

You speak of the ventilator which you have put under ground this Summer, as bringing in warm air. This ventilator will, to a certain extent, modify the air, but in all my experience I have failed to find that such a ventilator warmed the air to anywhere near the degree required in the repository, at the time when we need the air thus warmed, unless this underground ventilator is put so low in the ground that it makes it an impracticability.

The cold air of mid-Winter soon chills the ground on all sides of the ventilator, so that mine, which was 100 feet long and 3 feet deep, very often admitted air that was below the freezing point, and this would soon make the temperature inside the cellar too low, and then I would have to shut it off.

You speak of changing your ventilators a "thousand times or more" last Winter. This is the trouble with all ventilators; they need so much changing that it keeps the apiarist in almost as much of a *sweat* during the Winter months, as he was during the height of the honey season.

For this reason I began closing my underground ventilators little by little, until I learned that it was of no value, since which I have paid no attention to it, the same having been closed for the last five years. Soon after closing this ventilator, I began to experiment with the upper one, going very cautiously at first, until I found that when it was left closed a month at a time no bad results could be seen, and after a little I left it closed all the time.

After two Winters with the ventilator closed, I looked upon it as a needless thing, so when I re-roofed the bee-cellar in 1890, I paid no attention to matters of ventilation at all, and the result was that I never had my bees do better than they did last Winter in this cellar, having no ventilation whatever, except that which came in through walls of earth and mason work.

If I had the bee-house described above, I should try it with all the ventilators shut, going cautiously at first, and then if I discovered no bad results, I should do away with them entirely; for, if the bees can be wintered in this house without special ventilation being provided, it will save many steps, and help much in controlling the temperature.

Borodino, N. Y.

Uniting and Feeding Bees.

W. C. FRAZIER.

Early in September is the time to equalize stores and feed bees. As this season has been so poor that many colonies have not gathered enough honey to winter on, and as many have not attended to this matter yet, we will give our method of feeding.

If you have two colonies that are not strong enough in stores, the cheapest and best way is to unite them. This may be done by placing one body above another. It is best if you have them, to place a queen-excluding zinc between, and the queen should be removed from the upper story. They should remain in this position until all the brood is hatched, which will be 21 days, or in cold weather such as Fall months usually are, perhaps a day or two longer.

In the meantime they will carry into the lower hive all the unsealed honey in the upper, and if the cappings are taken off by the time the brood is all hatched, the combs will be empty.

The combs should be carefully put away as they will be valuable next Spring, and if the colony does not have enough stores, feed sugar syrup until they do.

To prepare sugar syrup for bees, add ⅛ of a teaspoonful of tartaric acid to one gallon of boiling water; into this, while boiling, stir 15 pounds of granulated, or Coffee A sugar. The granulated is much the best, and brown sugar will not do at all, as it will kill the bees.

It is best to feed the syrup warm. Put it in pans that will hold five or six pounds each, and feed a panfull each night until the colony has enough to winter on. Cover the pans loosely (so that it will sink, as the syrup recedes) with thin cheese cloth, and not a bee will be drowned.

It will require 20 to 25 pounds to carry a full colony through the Winter. Remember a few pounds too much will do no harm, while a few pounds too few will cause the loss of all.

While the flowers have failed this season to secrete nectar, for some reason to us unknown, although there was a most luxuriant bloom of white clover during the whole season, they have not, however, failed to produce seed, and there are from two to five seeds in each head.

We have had two or three dry seasons, and the white clover was being diminished, but this season has been wet, and it has raised so much seed, and grown so well, that the ground is almost covered with it now. This gives us something to hope for next season. While many of our hopes have not been fully realized in the past, and probably will not be in the future, yet the only thing we can do is to have the bees in proper shape for the harvest when it comes, and the only way to do this is to have the colonies strong.

Many colonies died last Winter. Fifty per cent. will die this, and there will be some honey to gather next season. A colony that just lives through, will take at least half the season to get in working condition, while a strong one will be ready for business early in the Spring.—*Homestead.*

Texas Apicultural Notes.

A. C. ATEN.

Several months have passed away since my last notes were written.

In this part of Texas we have had a pretty good honey-flow, in both the Summer and Fall. In Summer, mostly from cotton. This Fall, from morning-glory, asters and broom weed.

The honey crop in the Spring and also in the early part of the Summer was a failure.

I got on an average 40 pounds of honey per colony. One of my apiaries was in a part of the country where a hail storm destroyed nearly everything, about the first of June.

About the time the cotton began to bloom, it being late, the worms attacked it; and in poisoning the worms, my bees were injured very much, a few colonies being entirely destroyed.

I got 1,800 pounds of honey from that apiary of 70 colonies, being but little over 25 pounds to the colony; so the other apiaries had to do pretty well to bring the average up to 40 pounds per colony. One of the other apiaries averaging 65, and the other 44 pounds per colony. Two colonies gave a surplus of 125 pounds each. Why did they not all do as well?

Most of my honey is sold without much effort on my part.

On Nov. 7, the last day that I extracted honey, I took over 100 frames from 25 hives, extracted the honey, and returned the frames, using a veil, but no gloves, and did not get a sting. I do not think that I ever before worked a day with bees without getting some stings.

The weather here, for over a month, has been dry and warm, very favorable for saving the honey crop. Bees have been gathering more or less honey and pollen every day, until yesterday, when we had a fine rain. Last night it turned quite cool, and bees are flying very little to-day. The honey is of fine quality, very thick, and granulates very soon after it is extracted.

Round Rock, Tex., Nov. 10, 1891.

Bees and Fruit-Growing in England.

R. BROWN.

I am very pleased to say that I have had an abundant crop of every kind of fruit this year, and have made a fair price of all of it—we have just finished the damson gathering. The bees had the first taste of the sweets of the fruit crop, and this gave me the means to carry on operations for still another season.

Though the Summer has been so exceptional, I never experienced a better for fruit—the result of which is, that I have purchased five acres of land, which I hope to plant with fruit trees, and have enlarged my apiary, in order that I may take 10 colonies of bees to my newly purchased ground when planted, for I am more fully convinced than ever that bees and fruit-culture ought to go hand in hand.

It makes me smile when I read of some correspondents talking about "bees eating fruit." I certainly have seen bees on pears, but it was *after* the fruit had been attacked by wasps.

Now, sir, you know that some people are fond of finding fault with and destroying anything that comes in their way. I am not, for I have had my orchard about ten years, and during that time have shot but one bird, and that act I afterwards regretted, more especially when I found his gizzard was full of insects. Poor little chap! he was doing me good, and that is how I rewarded him; and so of birds and mankind in general.

Some grumble because the bees eat a few plums or pears, which, perhaps, would never have grown had they (the bees) not fertilized the blossom. I do not wish your readers to imagine that I dislike sport. I certainly like sport, more especially when the "furry" quadrupeds become too numerous, and I feel that I should like a rabbit-pie, which my good queen of the domicile says would be a "nice change."

To return to the bees. I have had over 200 pounds of honey this year from my apiary of 20 colonies. The cold, wet weather which prevailed while the "honey-flow" was on, prevented a larger haul.

I went in for extracting, this year, on the shallow-frame principle, and am very well pleased with the results. I am making from 8*d.* to 1*s.* per pound on honey, and have had a pretty fair trade. (I find that my honey is granulating. Does honey deteriorate by so doing, and what measures, if any, can be taken to prevent granulation ?)*

We, like the rest of the country, have experienced very heavy gales of wind this week ; but judge of my surprise, on going out one morning, to find that a shed containing 9 colonies of bees had been blown over during the night, and that not one of the hives was damaged, though some were on their sides, some this, some that way ; in fact, all ways but the right one. But not a bee was lost, for the simple reasons that the bees had well propolized their homes to the floor-board, and I always put mortar around the bottom of the straw skeps.

I will conclude by remarking that I have fed up all my colonies with pure *cane* sugar, which, I think, will prevent them from suffering with diarrhea. I hope to be able to report to you of this treatment next Spring.—*British Bee Journal.*

[*Since preparing the foregoing article for the press, Mr. W. C. Dow, one of the oldest citizens of Chicago, called upon us, and in the course of a friendly chat, said : "I bought half a barrel of white clover honey of you 13 years ago for family use. As it granulated, I had some of it liquefied and put into Mason jars for table use. As soon as that was used, I had more liquefied, and so on until all was gone. And it is wonderful to me that it is just as good to-day as it was when I bought it 13 years ago." This will answer Mr. Brown's first question very emphatically.

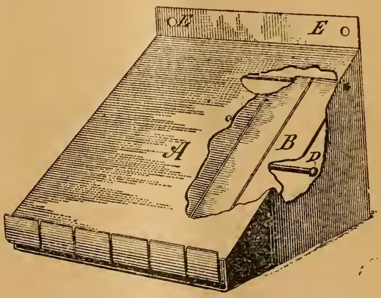
Nothing can be done to prevent pure honey from granulating, but it can easily be liquefied by placing it in hot water—not boiling it—and let it gradually become a liquid. It will soon granulate again, however.

To prevent this, some "mixers" have added glucose ; and this gave them a poor excuse for adulterating a pure product.—Ed.]

Bee-Escapes Forty Years Ago.

M. S. SNOW.

I see by the Bee Journal that the bee-escape is causing something of a strife as to who was the first to publish the idea. The idea is an old one, but different in its construction. As far back as about 1853, I purchased one of Mr. K. P. Kidder, of Burlington, Vt., for which I paid him one dollar. It was stamped "patented," but whether it was patented or not, it was a good idea. One thing it had in its favor, it would not smother bees, by getting clogged. He claimed that it would clear the honey-boxes, capture robbers, capture bees from a tree, *i. e.*, wild bees, and have them work in a hive, etc. He had a winter-case hive also, or a hive within a hive.



KIDDER'S BEE-TRAP.

I will give a brief description of the K. P. Kidder bee-trap, or box-cleaner. The engraving is a poor representation of it ; but it will, no doubt, be readily understood by the readers of the American Bee Journal :

A represents a tin box with a slanting top, open at the back and front, with 2 rods running through it, as shown in the engraving.

The door, B, is a strip of tin about ¼ of an inch wide, bent up at one end, and hangs on a wire at the other, which runs through the tin box, A, near the top. It rests on rod, D, so that it is held up about ⅛ of an inch from the bottom. It is loaded at the lower end with a little solder, about as large as a No. 1 shot.

Six of these gates or doors fill the box, and each one of them is independent of the others.

E, E, represent holes in the tin box by which to tack it to the hive.

As a bee comes out, it raises the door, which drops down as soon as it is out. The doors are up from the bottom about ⅛ of an inch, so that a bee from the outside could not enter. To capture robbers, it is reversed.

The escape described by Mr. Wilcox is good, and works well. I would not take $5.00 for the idea. I put it to work as soon as I received the BEE JOURNAL, and it was considerable help. There is no danger of the bees smothering. One of my neighbors smothered about one-half the bees in one of his colonies by the use of one of the "puzzles." Probably he did not understand the combination.

From 70 colonies, Spring count, my bees increased to 125, and I obtained 4,000 pounds of white comb-honey; the sections being all nicely filled. The season was very poor for honey up to July 13; then up to Aug. 17 it was a continual shower.

Osakis, Minn., Oct. 23, 1891.

Half-Story Supers for Extracted-Honey.

F. A. GEMMILL.

As promised, I will attempt a short article on the advantages of using a super or half-story (in other words, a case containing drawn combs half the depth of those used in the brood-chamber) for the production of the best extracted honey, and as an assistant in securing a first-class crop of comb-honey, such as no one need be ashamed to place on any market.

I know there are objections to a practical apiarist having different sizes and styles of hives and combs in his apiary; still experience teaches me at least that the advantages outnumber the disadvantages, especially if the outside dimensions of the hives and supers are alike.

1. I would ask, why object to a half-story containing combs, such as described, any more than the use of supers containing sections for comb-honey, so long as the complete tiering up of all is not interfered with.

2. Why should bees be allowed to cling to the brood-chamber in the forepart of the season, depositing honey therein, only to crowd out the space which should be occupied by the queen?

Simply because there is not sufficient inducement to entice them and deposit it above.

Now, we all know that the giving of a full story in most localities, at the time when more room is needed, is rather more space than is necessary, and consumes too much of the heat required in the brood-chamber, unless the hives are chaff packed; and again, the giving of a super containing sections, especially if they are not nearly all drawn out the previous season, does not always succeed in gaining the desired end. There is, however, no trouble if a half-story of drawn combs is first given, as such can compose a part of the brood-chamber proper, sufficiently long to secure the point sought for.

The market requiring choice grades of honey is yearly becoming more marked; particularly is this the case in regard to variety and quality; therefore, I venture the opinion that, while honey may always be honey in the proper sense of that word, still all kinds of this article are not alike to a consumer, any more than are all kinds of butter, or, in fact, any delicacy usually found for sale, and no one knows this better than bee-keepers generally.

Now, in order to secure the different varieties by themselves as nearly as possible, no other system offers better facilities than the half-story system. There are localities and hives where it is not only advisable, but necessary to extract from brood-combs in order to secure the honey of poor quality and flavor from being deposited in the sections (a place, by the way, in which the very finest honey only should be stored), or placed in combs of full depth, when added above the brood-chamber; thus completely destroying the appearance and flavor of a large quantity of what ought to have been a first-class article of clover honey. While my own locality does not differ materially from the one quoted, still my method of procedure is somewhat different; not, however, that it is by any means new, but because I am not an advocate of extracting from combs containing brood, especially unsealed larvæ, as I believe brood in brood-combs and honey in store combs to be the proper place for both—in other words, the queen in one apartment, and the honey in another, at all times, except, of course, during Winter.

I trust you will pardon the digression, when I state that incalculable damage is done yearly from such work, independent of the risk of encouraging, if not propagating, the great curse of our pursuit, viz.: foul-brood.

The method adopted by myself is as follows: About the first of June, or a little earlier in some instances, as soon as the queen requires more room (I use the 8-frame Langstroth and New Heddon hives), the hive is opened, and the face of every capped cell of honey is bruised by simply drawing a knife flatwise across the comb, first driving the bees away with smoke; or, if necessary, shaking them from the combs altogether, when a half-story of drawn combs, as described, is placed over the brood-chamber, and the cover to the hive replaced for two or three days, when it is again opened and a queen-excluding honey-board placed between the two, as egg-depositing in supers is not encouraged, although the presence of a few eggs will do no harm at this juncture, providing the bees are not allowed to build queen-cells, and a young queen is reared and destroys the one below. It is, of course, presumed, when the excluder is inserted, that the old queen is in the lower portion of the hive.

Reversible frames are said to accomplish this end, if the reversing is done at the proper time, without the necessity of brushing the face of the comb; but not having had an extended experience with such, I can give no decided opinion, although I do not see why such a course would not work. This, however, I do know: the dividing of the Heddon hive, viz.: placing the top half below, and the bottom part above, will effect the same purpose.

There will now be no difficulty in securing the honey in its proper place, after it has been carried above, from this time henceforth. You will please observe there is no difference up to this point, whether working for comb or extracted-honey, as that can be determined afterwards, for the strength of the colony and the strain or race of bees are factors that ought to be considered, especially in producing the former article.

We will suppose extracted-honey is desired. If so, all that is required is to raise up the first half-story or super containing the dark honey stored from the brood-chamber, and any that may have accumulated before the flow from clover commenced, and add a second, which will, of course, now be filled with clover, while a third or fourth may contain basswood or thistle, as the case may be, and yet all can be thoroughly ripened on the hive, as it should be, for many reasons, too numerous to mention here.

If, however, for want of sufficient combs, you prefer extracting the different kinds before thoroughly ripened on the hives, it is an easy matter to place one of the several bee-escape boards (preferably, the Porter spring contrivance, which, by the way, are only beginning to be half appreciated as they ought to be) under each top story, and free the supers from bees in a few hours. They can now be extracted and again returned to the hives.

This way of managing, to one who has never before tried the escape system, will, I fancy, become permanent with them, as the pleasure of removing shallow supers, containing nothing but honey, has only to be tried once to be appreciated.

In the event of your being a producer of comb-honey, all that is necessary is to tier up as for the extracted article. With this advantage, only one case of sections need be given any colony, unless considered advisable to do so; and this is not given until the honey is coming in rapidly, and the bees are ready and willing to fill and seal the cells in short order, and thus present you with an article as white as snow, instead of travel-stained, propolized sections, sufficient to disgust any one from purchasing even at a low figure.

Again, I find I can get more and better comb-honey with less unfilled sections than by any other process; in fact, it is not at all desirable to carry over any partly-drawn sections from the previous year, for, in my own experience, they are not filled and *sealed* any sooner than a new case of sections containing full sheets of thin foundation, when added under a half-story as described.

The only valid excuse against using these half-stories is the expense and the time consumed in handling the double number of frames. As to the first reason, I am free to admit, the cost is a trifle greater; still, if protected by outside cases until clover commences to bloom, the material comprising them need not be any thicker than ⅜ inch.

As to the second reason, I find it easier and more expeditious to uncap and extract two sets of half-depth frames than one of the full size, as one sweep of the knife cleans the face of every comb in an instant; and if your frames are wired as they ought to be, even in half-stories (notwithstanding what others may say to the contrary), and your extractor is capable of taking a full set of eight frames, no time need be uselessly sacrificed.

Now, friends, try them. There is, however no necessity of going into the experiment in a wholesale manner; a few at first, and more afterwards if you need them, will be a wise plan to follow. I know they are gaining ground yearly, and this fact alone should be a guarantee that they are not a useless appendage in the apiary; and, as I am about concluding, let me add: At all times have plenty of store or surplus combs, no matter of what style or depth, as they are good capital at any time, especially in a poor season, like the past, as bees stored in such did well, while those in sections or on frames of foundation did little or nothing.

Lastly, do not be afraid to put your name on all honey offered for sale, at the same time stating the source from which it is secured, and thus prevent confusion and suspicion. Too much need not be on the label, but it should be in large print, and easily understood. —*Read at the Brant, Ont., Convention.*

Bee Scouts Finding a Location.

GEORGE POINDEXTER.

The question has arisen, do bees locate a home before leaving the parent hive? I contend that they do send out scouts to locate a home for the swarm, previous to entering the hive or tree. I am not guessing at this, but I know it from observation and experience.

Whoever heard of bees locating a home by the echo of the sound made by their wings? Bees never enter a hole or hive without making a thorough examination of it. If they did, they would find the place too small, sometimes, and have to come out again, which they do not do when they enter a tree or hive of their own free will.

Those who do not believe that bees will locate and clean out a home previous to entering it, should put a few hives in some apple trees, with an empty comb or two in them, putting in some dirt or rotten wood, to give the scouts something to do. That will give convincing proof that what I have said is true. Did you never see bees in a tree carrying out dirt and trash, getting ready for the swarm to enter? If you were not a practical bee hunter, you might mistake the scouts for bees getting honey from flowers.

If bees pass a good home and enter a worthless one, it is because they first picked it out and cleaned it up. How often have bees been put into a new hive and have left it on account of some disgusting smell about it which they did not like!

When bees are clustered in the woods hundreds of scouts leave the cluster in search of a home, taking different directions, and when a home is found, cleaned out, and the cracks glued up with propolis, then the bees return to the cluster and give notice that everything is ready, and all go straight to the tree or hive. Then a lot of scouts may come in from other directions, only to find that the swarm has gone, and not knowing where they were, they remain there for two or three weeks, and dwindle away, until from perhaps a gallon of bees only two or three remain.

Kinney, Ills.

Bee-Keeping in Florida, Etc.

MRS. L. HARRISON.

My experience with apiarists has been that they are a liberal, generous sort of people, and that after spending much time and money in acquiring knowledge, they impart it freely to others, without money and without price. Their latch string hangs out to all wide-awake, progressive apiarists, but they are not slow in detecting impostors, who only desire free entertainment.

Last week I was highly gratified by a visit from a lady who is on her way to Florida to start an apiary on the St. Johns River, in an orange orchard. I told her that bee-culture was no bonanza, but fair returns might be expected from time and labor expended.

She had been offered an apiary of 50 colonies in Nebraska very cheaply. I advised her not to purchase until she was located, and then consult the apiarists of that locality, for Southern bee-culture must be different from Northern, as the honey-producing plants and time of blooming do not correspond.

Bee-keepers that are located in Eastern Florida, on the St. Johns or Indian River, produce but little or no comb-honey on account of the dampness of the climate. I met a lady who had spent several years in that locality, who said that she never saw a place there that she did not think that she could take a broom handle and run it down to water; and that clothing left upon the first floor of a house during the night would not be safe to put on in the morning on account of dampness.

A local apiarist called to-day (Oct. 26), and said his bees were bringing in white pollen, which he thought they obtained from the asters, as they were blooming nicely, apparently uninjured by the frost. He said that he had a queen that had lost one leg and one wing, but she was apparently as good as ever.

A neighboring bee-keeper purchased two Carniolan queens, and offered him one; he took her, and superseded the crippled one. After a few days he opened the hive, and found her upon the comb laying.

After a few weeks he began watching for this new variety of bees, but could see none. Finally, he came to the conclusion that the bees were dwindling away, and opened the hive to investigate. He found the queen upon the comb, plenty of eggs, but neither larvæ nor sealed brood. The queen was a large, fine-looking one, and as he held the comb in his hands, she took wing and flew away. In a moment she returned and lit upon the hive. Before he had returned the comb to its place, she was up and away, and that was the last seen of her. He thought she might return to the hive, but she did not, and in two days the hive was robbed, which demoralized his apiary.

This is the first instance which has come under my notice of a queen that laid eggs which never hatched. I have come across a number that laid drone eggs only. It is hardly possible that the bees had acquired the habit of eating eggs; certainly they did not do so under the reign of the crippled queen.

The person whom I mentioned as purchasing the Carniolan queen is a hard working blacksmith—working for his daily bread. In purchasing this queen he not only lost the price of it, but a valuable colony of bees.

Every little while there is a new variety of bees brought into notice, whose good points extend to the skies in the estimation of those who have them for sale, and it would be well to let those experiment with them who have so much money that they have no other use for it.

Bees that are good workers, starting out early in the morning and working until evening, attending strictly to business, sticking to the combs when they are removed, and are able to defend their home against the moth, are good enough for me, and all that I desire.—*Prairie Farmer.*

Bee-Keeping in Nebraska.

WM. STOLLEY.

On Oct. 15 my bees in double-walled hives were ready packed, inside the hives, for wintering, and on Nov. 1 those in New Heddon hives were ready packed in vaults, with dry leaves, so that I now can send you my report for the season of 1891 in full.

I lost no bees during the Winter of 1890 and 1891, and after selling a few colonies in early Spring, I had, on April 1, 1891, 18 colonies in my double-walled hives (American frame), and 5 colonies in the New Heddon hives.

The Summer was exceptionally cold and wet, until the latter part of July. From June 2 until Aug. 27 I had 13 swarms; 7 swarms from the 5 colonies in the Heddon hives, which were worked for comb-honey only, and 6 swarms from my 18 colonies on the American frame, which were worked for extracted-honey. All swarms were returned to the old stands and hives, except 2 of the swarms from the Heddon hives.

At the close of the season I had 42 colonies—7 in Heddon hives, and 35 in American frame hives, of which 20 hives have 10 frames, and 15 hives 14 frames each, all provided and arranged with half-depth supers for tiering up.

I obtained from my best colony, 143 pounds of surplus extracted-honey, and on an average 106 pounds per colony, Spring count.

From the colonies in Heddon hives, I got 40 sections of comb-honey from the best colony, and 158 sections in all, well capped; besides a lot of sections fully and partly-filled, but not well enough sealed to be salable. A colony of hybrids gave me the most surplus this Summer.

Forty colonies are strong in bees, and none have less than 25 pounds of choice stores for Winter, and most of them have 30 pounds each. I winter them as usual on the summer stands, in the bee-shed.

During the season just passed, I have re-queened my apiary, so that I now have 34 young queens of 1891, one queen of 1890, 4 queens of 1889, and one queen of 1887. Notwithstanding the utmost care taken to breed pure, and only from the choicest of my old queens, once in a while a hybrid will appear, owing to a few colonies of hybrids being kept a few miles distant from my apiary.

I notice in the BEE JOURNAL of Oct

29 that my young friend, J. W. Peterson, in his report, says that golden-rod was the principal plant here this year. In this Mr. Peterson is mistaken.

I never knew bees to gather much honey from golden-rod in this part of the country, although this plant abounds plentifully in several varieties. His bees got their stores from the sweet clover and alfalfa fields, principally, which are within 2 and 2½ miles from his location.

Alfalfa is the rapidly-coming honey-plant in Nebraska, and as a fodder yielder, it ranks pre-eminently as No. 1, where the soil is suitable; while the sweet clover is the very thing along roadsides and on waste places.

I have, and have had for several years, about 30 acres of alfalfa, and secure 3 cuttings annually—this season about 6 tons per acre. Farmers in Nebraska, who are possessed of suitable land, should sow alfalfa. It pays, even without bees to gather the honey.

Grand Island, Nebr., Nov. 2, 1891.

Punic and Minorcan Bees.

JOHN HEWITT.

On page 535 is an extract from the *Revista Apicola*, stating that the Punic or Minorcan (or more correctly Balearic) bees are one and the same. The editor and writer of that paragraph, F. C. Andreu, has several times written to the *British Bee Journal* (viz.: in 1886, pages 169 and 282; and in 1887, page 564), that these bees are like Italians, and "wear the 3 classic gold bands;" that they are "as like Carniolans as two peas." Mr. Cowan wrote, on page 573, for Nov. 29, 1888, that they are "almost black." It is true that Mr. Andreu corrects himself in that number, on page 580, but it is hardly fair to quote as "good authority" a writer who can make so many mistakes in the matter. Much is being made out of the meaning of the word Punic. All classical scholars know that it means "belonging to or appertaining to the Phœnicians; a people whose capital was Carthage." I have several times stated where they came from, and who first sent them to me, but it suits some to ignore these facts.

Sheffield, England, Nov. 4, 1891.

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms.

Convention Notices.

☞ The next annual meeting of the Rock River Bee-Keepers' Association will be held at Sterling, Ills., on Thursday, Dec. 3, 1891.
J. M. BURTCH, Sec., Morrison, Ills.

☞ The annual meeting of the Colorado State Bee-Keepers' Association will be held in Denver, Jan. 18 and 19, 1892.
H. KNIGHT, Sec., Littleton, Colo.

☞ The Michigan State Bee-Keepers' Association will meet in Grand Rapids, Mich., on Thursday, Dec. 31, 1891, and Friday, Jan. 1, 1892, GEO. E. HILTON, Sec., Fremont, Mich.

☞ The Illinois State Bee-Keepers' Association will meet in Springfield, Ills., on Wednesday and Thursday, Dec. 16 and 17, 1891.
JAS. A. STONE, Sec., Bradfordton, Ills.

☞ The Eastern Iowa Bee-Keepers' Association will meet in De Witt, Iowa, on Wednesday and Thursday, Dec. 2 and 3, 1891.
FRANK COVERDALE, Sec., Welton, Iowa.

☞ The Huron, Tuscola and Sanilac Counties Bee-Keepers' Association will meet at Concordia Hall, Sebewaing, Mich., on Dec. 15, 1891. All interested are cordially invited to attend, and help make this one of the best meetings ever held by this association.
JNO. G. KUNDINGER, Sec., Kilmanagh, Mich.

☞ The Northwestern Bee-Keepers' Society will hold its annual convention at the Commercial Hotel, corner of Lake and Dearborn Streets, in Chicago, Ills., on **Thursday** and **Friday, Nov. 19 and 20,** at 9 a.m. Arrangements have been made with the Hotel for back room, one bed, two persons, $1.75 per day, each; front room, $2.00 per day for each person. This date occurs during the Fat Stock Show, when excursion rates on the railroads will be one fare for the round-trip.
W. Z. HUTCHINSON, Sec., Flint, Mich.

☞ The North American Bee-Keepers' Association will hold its annual convention in the Agricultural Hall, at Albany, N. Y., from Dec. 8 to 11, 1891. The hotel reduced terms are as follows: Globe Hotel, $2 per day; American Hotel, $2; Cox Brothers, No. 4 William st., $1; W. H. Keeler, 488 Broadway, European plan, rooms 50 cts., 75 cts., and $1; Kimbal House, 69 Washington st., $1; Merchants Hotel, 497 Broadway, $2; I. Keeler, restaurant, 56 State st.; Odel Restaurant, 94 State st. Reduced railroad rates have been secured from Chicago and the Mississippi River and from the South. Every local and State association should send one or more delegates. Those who intend to be present should send their names either to the President or Secretary. The programme will be issued soon, giving all particulars.
P. H. ELWOOD, Pres., Starkville, N. Y.
C. P. DADANT, Sec., Hamilton, Ills.

☞ The programme and railroad rates will be given in full next week. They were received after these forms were filled, and ready for the press.

Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

Wavelets of News.

Bees in Mexico.

Fifty years ago bees were not known in the huastecas in Mexico (huasteca signifies the land of flowers); to-day there is not a village, an estate, a hamlet, or a house that has not got its hives. The Indians do not cultivate bees for the honey, but for the wax, which is bleached and sold in cakes at 75 francs to 90 francs the 11½ kilos. It is scarcely 20 years ago since the huastican bee-keepers threw away the honey. Now they sell it for 1 peso (5 francs), the box of 5 gallons, or 20 litres. This honey is exported by Tampico. A well-cared-for apiary will produce 1 arroba (25 pounds) of wax per box, and each box gives two, three, or four swarms a year.

Anti-formic Elixir.—A chemist in Albi, M. Cambonlives, pharmacist of the first class, has just discovered an elixir which renders quite harmless the stings of bees, hornets, and of all the other *apidæ*. Thanks to this elixir, swelling which is consequent on the stinging of bees is no longer to be feared.—Translated from *La Culture rationnelle des Abeilles*, by J. Dennler, for the *British Bee Journal*.

Words of Encouragement.

Now, brother bee-keepers, there is no reason that the poor season just past should cause us to neglect our chosen, pleasant and profitable pursuit. All productive industries have their seasons of failure, and who would think of abandoning the growing of corn or wheat because there had been a season of poor crops.

So far from being discouraged, we were never more interested in bee-keeping than now, and are preparing for future work with greater diligence than ever before, for we find with greater clearness each year, that success in obtaining paying crops of honey depends on applying correct knowledge to practical ends.—B. Taylor, in the *Farm, Stock and Home*.

Bees in Early Winter.

Bees should be prepared for Winter not later than November, and if a cold, early Autumn sets in, the work should be done on the first warm day after the cold spell. Provided the weather remains sufficiently warm, the later the bees are housed the better it is for them. The bees that are wintered in-doors should not be taken in until cold weather is actually here for good, or else it may be necessary to move them back again on the summer stands, should a warm spell follow. Before removing the hives inside, the caps must be removed, and wire nailed over all of the openings to prevent mice from entering.

During the scarcity of natural stores in early Fall, plenty of food should be given to them to keep up the brood rearing. The important point of having a good queen should not be neglected, for the queen is the life of the colony.—Helen Wharburton, in the *American Cultivator*.

Why Bees Die in Winter.

Bees die in Winter because the conditions necessary for their health and comfort are not fulfilled. In the main bee-keepers agree as to what these conditions should be, but differ in their methods for securing them.

Every bee-keeper should know what these conditions are, and after knowing other people's methods, select the ones that his judgment and experience of others would recommend, making such variations as would be wise.

These requisites are in brief, wholesome food, pure air, an even and proper temperature, and quiet. The first of these means good capped honey, and not less than 25 pounds; though if all the above conditions were fulfilled, not near this amount would be needed.

Winter is the resting time for the bees, and if not disturbed or compelled to keep up bodily heat, but very little honey will be consumed.

Bees as well as men, need pure air, but they do not need much of it. This is true of all insects, and especially when they are inactive. So while the hive must be ventilated, all drafts of air through it should be avoided.—*Indiana Farmer*.

The North American Bee-Keepers' Convention will be held at Albany, N. Y., Dec. 8 to 11.

Ground Cork is the best packing material for bees in Winter. It never becomes damp, and it is a thorough non-conductor. It is so cheap that its cost is practically nothing.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Nov. 19, 20.—Northwestern, at Chicago, Ills.
W. Z. Hutchinson Sec. Flint Mich.

Dec. 2, 3.—Eastern Iowa, at DeWitte.
Frank Coverdale, Sec., Welton, Iowa.

Dec. 3.—Rock River, at Sterling, Ills.
J. M. Burtch, Sec., Morrison, Ills.

Dec. 8, 11.—North American, at Albany, N. Y.
C. P. Dadant, Sec., Hamilton, Ills.

Dec. 15.—Huron, Tuscola and Sanilac, at Sebewaing, Mich.
Jno. G. Kundinger, Sec., Kilmanagh, Mich.

Dec. 16, 17—Illinois State, at Springfield.
Jas. A. Stone, Sec., Bradfordton, Ills.

Dec. 31.—Michigan State, at Grand Rapids.
Geo. E. Hilton, Sec., Fremont, Mich.

1892.
Jan. 18, 19.—Colorado State, at Denver.
H. Knight, Sec., Littleton, Colo.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

North American Bee-Keepers' Association

President—P. H. Elwood....Starkville, N. Y
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y and Manager—T. G. Newman, Chicago.

Bee and Honey Gossip.

Fertilization of Queens.

I am somewhat surprised at Mr. Alley's statement about the fertilization of queen bees. My apiary has been about 3½ miles from Mr. Samuel Wilson's until this Summer. His bees were Italians, and mine were blacks. My bees have crossed and recrossed with his Italians until I have but one colony of black stock. As there were no other Italian bees in the country, they have certainly crossed with his. I think it depends mostly on the surrounding country, and the situation of apiaries about this crossing of bees. I have some bees with curious markings. The first band is dark-yellow or copper colored, while they have white hair, which looks like white rings around them. The queens of these colonies are very prolific, and their progeny good honey-gatherers. Some of my bees show the full markings of Italians, while others do not. I do not know anything about the Carniolans, as we have none in our country. We are having very dry weather here, and I think vegetation will suffer if it does not rain before long. The weather has been so cold and dry that the bees did not do as well as they would have done if the weather had been warmer, but I think that most colonies have enough stores for Winter. I think there is a big difference between the working quality of Italian and black bees. Hybrids are generally good workers, as they often possess the good qualities of both the Italians and blacks.

R. A. Shultz.

Cosby, Tenn., Oct. 31, 1891.

Light Crop of Honey.

I increased my apiary this season from 80 colonies, Spring count, to 102 colonies, Fall count, and secured only 1,000 pounds of comb-honey. The early part of the season being very cold and damp, there was not much nectar secreted by the flowers. J. W. Carter.

Wellington, Nev.

Metheglin.

While in the army I once tasted metheglin. It was such a nice drink that I never forgot it. The recipe for making it in the Bee Journal of Oct. 29, is worth the subscription price of the Journal to me.

Theodore Deschner.

Seattle, Wash.

Albany Convention.

The headquarters of the North American Bee-Keepers' Association will be at the Globe Hotel, Albany, N. Y. Rates, $2.00 per day. It is a first-class temperance house. Thos. Pierce.

Gansevoort, N. Y., Nov. 11, 1891.

Short Crop and but Few Swarms.

My report for 1891 is a short crop of honey and few swarms. I had 12 colonies, Spring count; now I have 13 colonies. I had an average of 20 pounds of honey to the colony. The American Bee Journal gives me much pleasure. It has been a great help to me this season; more so then it would if we had a large crop of honey. Those recipes for bee-food were very useful this season. I will take the Bee Journal as long as I keep bees. Forrest W. Streeter.

Waupun, Wis., Nov. 7, 1891.

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OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

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On **30** lines, or more, 4 times, 20%; 8 times, 25%; 13 times, 30%; 26 times, 50%; 52 times, 60%.
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Advertisements intended for next week must reach this office by Saturday of this week.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Send us *one new* subscription, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to pay for another year.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. It costs:

For 50 colonies (120 pages)	$1 00
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☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal......	$1 00....	
and Gleanings in Bee-Culture....	2 00....	1 75
Bee-Keepers' Guide.....	1 50....	1 40
Bee-Keepers' Review........	2 00....	1 75
The Apiculturist.............	1 75....	1 65
Canadian Bee Journal.......	1 75 ...	1 65
American Bee-Keeper.... ..	1 50....	1 40
The 7 above-named papers	6 00....	5 00
and Langstroth Revised (Dadant)	3 00....	2 75
Cook's Manual (1887 edition)	2 25....	2 00
Quinby's New Bee-Keeping.	2 50....	2 25
Doolittle on Queen-Rearing.	2 00....	1 75
Bees and Honey (Newman)..	2 00....	1 75
Binder for Am. Bee Journal.	1 60....	1 50
Dzierzon's Bee-Book (cloth).	3 00....	2 00
Root's A B C of Bee-Culture	2 25....	2 10
Farmer's Account Book.....	4 00....	2 20
Western World Guide	1 50....	1 30
Heddon's book, "Success,"..	1 50....	1 40
A Year Among the Bees	1 50....	1 35
Convention Hand-Book......	1 50....	1 30
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Rural New Yorker	2 50....	2 00
Nebraska Bee-Keeper.......	1 50....	1 35

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

◆

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

◆

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

◆

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

YOU NEED an Apiary Register, and should keep it posted up, so as to be able to know all about any colony of bees in your yard at a moment's notice. It devotes two pages to every colony. You can get one large enough for 50 colonies for a dollar, bound in full leather and postage paid. Send for one before you forget it, and put it to a good use. Let it contain all that you will want to know about your bees—including a cash account. We will send you one large enough for 100 colonies for $1.25; or for 200 colonies for $1.50. *Order one now.*

◆

The Bee-Keepers' Directory, by Henry Alley, Wenham, Mass. It contains his method for rearing queens in full colonies, while a fertile queen has possession of the combs. Price by mail, 50 cents.

◆

We send both the Home Journal and Bee Journal for one year, for $1.35.

◆

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, $1.00. For sale at this office.

◆

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this Journal, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

The Honey-Bee; Its Natural History, Anatomy, and Physiology. By T. W. Cowan, editor of the *British Bee Journal*, illustrated with 72 figures and 136 illustrations. $1.00. For sale at this office.

◆

Well Pleased.

Your check for $10, my premium for guessing the rebus, came to-day. Some told me I would never hear from it, but when I took your check to our bank, they handed me the money without asking a question. I am well pleased with the ILLUSTRATED HOME JOURNAL.

MRS. JOHN E. ZOOK.
Monitor, Kans., Oct. 27, 1891.

◆

We Club the American Bee Journal and the Illustrated Home Journal, one year for $1.35. Both of these and Gleanings in Bee Culture, for one year, for $2.15.

◆

The Union Scale you sent me was received some time since, and I am well pleased with it. I asked the price of such a scale in our hardware store, and was told that a single beam to weigh 240 pounds would cost $4.00. For such I paid you only $3.00, saving me a dollar.—Jacob Moore, Ionia, Mich.

◆

Those who are in arrears for subscription to the BEE JOURNAL for this year are reminded that the year is about closing, and it is time to pay up for this year, and add a dollar for next year.

◆

Money in Cabbage and Celery.—"Blood will tell." Good crops cannot be grown with poor strains of seed.

For 16 years Tillinghast's Puget Sound Cabbage, Cauliflower and Celery Seeds have been gaining in popularity. The most extensive growers all over the Union now consider them the best in the world. A catalogue, giving full particulars regarding them, will be sent free to any one interested. When writing for it, enclose 20 cents in silver or postage stamps, and we will also send "HOW TO GROW CABBAGE AND CELERY," a book worth its weight in gold to any grower who has never read it. Address

ISAAC F. TILLINGHAST,
18A16t La Plume, Pa.

HONEY AND BEESWAX MARKET.

NEW YORK, Nov. 13.—Demand is limited, and supply sufficient. We quote: Comb—Fancy white, 1-lb., 14@15c; 2-lb., 12c; off grades, 1-lb., 12@13c; 2-lb., 10@11c; buckwheat, 1-lb., 10@11c; 2-lb., 9c. Extracted—Basswood, white clover and California, 6¾@7c; orange bloom, 7@7½c; Southern, 65@70c ℔ gal. Beeswax, 26@27c.

HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, Nov. 14.—The demand and supply are fair. We quote: White comb, 1lb., 15@16c; dark, 10@12c. Extracted — White, 7c; dark, 5@6c. Beeswax, is in light supply, and demand good, at 23@26c.

CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Nov. 14.—The demand is slow, with good supply, except choice comb. We quote: Choice white comb, 14@16c. Extracted, 5@8c. Beeswax is in good supply and fair demand, at 23@25c for good to choice yellow.

C. F. MUTH & SON,
Cor. Freeman & Central Aves.

NEW YORK, Nov. 13.—Demand for honey is fair, with adequate supply; buckwheat not so plentiful as clover. We quote: Fancy clover, 14@15c; fair, 1℔., 12@13c; buckwheat, 10c. Extracted, 7@7¼c. Beeswax, in fair demand, with adequate supply, at 25@27c.

CHAS. ISRAEL & BROS., 110 Hudson St.

CHICAGO, Nov. 14.—The demand is good for fancy white comb-honey, in 1-℔. sections, at 16c; other grades white, 14@15c. Extracted honey selling slowly, owing to warm weather We quote it at 6½@7½c. Beeswax, in light supply and good demand, at 26@27c.

S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Nov. 14.—Demand is good, with comb in fair and extracted in light supply. We quote: Comb—1-lb. fancy, 15@16c; dark, 12c. Extracted—White, 7@7½c; dark, 5@6c. Beeswax—None in market.

HAMBLIN & BEARSS, 514 Walnut St.

DETROIT, Nov. 13.—The demand for comb-honey is fair and supply moderate. We quote: Comb, 12@13c; extracted, 7@8c. Beeswax in good supply, and light demand, at 25@26c.

M. H. HUNT, Bell Branch, Mich.

CHICAGO, Nov. 14.—Demand is good and supply small of gilt-edged stock. We quote: Choice white comb, 14@16c. Extracted, 6@8c. Beeswax, in light supply, and good demand, at 26@27c. J. A. LAMON, 44-46 S. Water St.

MILWAUKEE, Nov. 13.—Demand not very brisk; supply good, and of better quality. We quote: Comb—choice, 1-lb., 15@16c; fair, 13@14c; dark, 10@12c. Extracted—white, in barrels or kegs, 7@7½c; dark, 6@6½c. Beeswax, 25@28c.

A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO, Nov. 10.—Demand good, supply small. We quote: Comb, 1-lb., 10@13c. Extracted, 5½@6½c. Beeswax, in light supply and good demand, at 23@24c.

SCHACHT, LEMCKE & STEINER,
16 Drumm Street.

NEW YORK, Nov. 13.—Demand moderate, and supply reduced, with no more glassed 1-℔ nor paper cartons, 1-℔. We quote: Comb, 1-℔, 14@15c. Extracted—Basswood, 7¼@7½c; buckwheat, 5½@6¼; Mangrove, 68@75c per gal. Good demand for dark extracted honey. Beeswax, in fair supply, with small demand, at 26@27c.

F. G. STROHMEYER & CO., 122 Water St.

CHICAGO, Nov. 14.—Demand is now good, supply is not heavy. We quote: Comb, best grades, 15@16c. Extracted, 6@8c. Beeswax, 26@27c.

R. A. BURNETT, 161 S. Water St.

BOSTON, Nov. 13.—Demand is good, supply ample. We quote: 1-℔. fancy white comb, 15@16c; extracted, 7@9c. Beeswax, none in market.

BLAKE & RIPLEY, 57 Chatham St.

ALBANY, N. Y., Nov. 13.—Demand is good, and supply liberal. We quote: White comb, 14@16c. Extracted—White, 7½@8½c; dark, 6@6½c. Beeswax, supply light, and demand good at 28@30c.

H. R. WRIGHT, 326-328 Broadway.

NEW YORK, Nov. 13.—Demand is fair, and supply ample, except buckwheat comb. We quote: Fancy white comb, 14@15c; buckwheat, 10@11c. Extracted—Clover and basswood in good demand at 6@8c; buckwheat in demand at 5½@6½c. Beeswax in fair demand at 26@28c.

F. I. SAGE & SON, 183 Reade St.

If You Have any honey to sell, get some Honey Almanacs and scatter in your locality. They will sell it all in a very short time. We have a few Almanacs for 1891, which we are selling at half price.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line,** for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

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19D13t
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BREEDING QUEENS,
$3.00 to $5.00 each. Our bees are excellent workers, gentle and beauties. Safe arrival and entire satisfaction guaranteed.
1D24t **S. F. & I. TREGO, Swedona, Ill.**
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ONE COLONY Saved from Death the Coming Winter Would Repay the cost of a copy of "ADVANCED BEE CULTURE" ten Times Over. In 5 of its 32 Chapters may be Found the Best That is Known upon Wintering Bees. It costs 50 cents but its Perusal may Make you $50 Richer next Spring. The "REVIEW" and this Book for $1.25. If not Acquainted with the "REVIEW," send for Samples. W. Z. HUTCHINSON, Flint, Michigan.

6Dtf *Mention the American Bee Journal.*

The Honey Almanac

FOR 1891.

JUST the thing needed to create a **demand** for HONEY at home. Bee-keepers should scatter it freely. It shows the uses of Honey for Medicine, Eating, Drinking, Cooking, for making Cosmetics, Vinegar, etc.; also uses of BEESWAX. Price, 5 cts.; 25 copies for $1.10; 50 copies, $1.70; 75 copies, $2.30. 100 for $2.90. The foregoing are POSTPAID prices.

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12A26t
Mention the American Bee Journal.

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Room 514 Chamber of Commerce Building,
CHICAGO, ILL.

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Mention the American Bee Journal.

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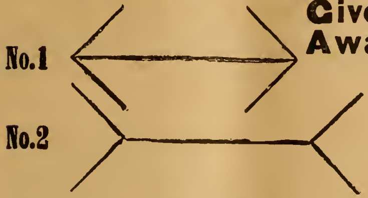
Given Away



We will give the first person telling us on or before January 1st, 1892, which is the longest line—number 1 or number 2—**$150 in Gold**; to the one giving the next correct answer, **$75**; to the third, **$30**; fourth, **$25**; fifth, **$20**; sixth, **$15**. To the next 25 persons, **$5** each. To person sending last correct answer, **$150 in Gold**; next to the last, **$75**; next, **$30**; next 25 persons, **$5** each, and the next 25 persons (should there be so many who send correct answer), **$2** each. Be careful, it is not as easy as it looks. Only one answer will be allowed each person. With your answer send us 25c. postal note or 30c. in stamps for our **Celebrated Fountain Pen.**

Remember you pay nothing for the presents, as they are absolutely given away to introduce our pens. Immediately after January 1st, 1892, a printed list, giving the names and addresses of the successful contestants, will be mailed each person who sends in an answer. Address **Luddington Supply Co.**
9 Park Place, New York City.

Mention the American Bee Journal.

Send 50 Cents For my Book, entitled—"A Year Among the Bees," 114 pages, cloth bound. Address

DR. C. C. MILLER,
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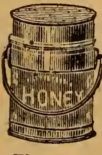
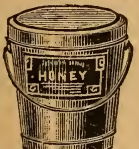
Tin Pails for Honey.

THESE Pails have full covers, and are excellent for selling Honey in the Home Market; and after the Honey granulates in them, it can be shipped anywhere with perfect safety. All sizes have a bail, or handle, and when empty are useful in every household.



The engraving shows STRAIGHT TIN PAILS, of which there are 3 sizes, holding respectively 3, 5 and 10 lbs. of Honey. Assorted Samples of the 3 sizes will be sent by express for 40 cts. In quantities, the prices are:

	Per doz.	Per 100
Gallon...holds 10 lbs	$1.80	$12.00
½-Gallon, holds 5 lbs	1.50	9.00
Quart, holds 3 lbs	1.20	7.00



The second engraving represents THE TAPERING TIN PAILS—made heavier and stronger than those with straight sides. The covers are deeper, and the top-edge of the Pail is doubled over, making it smooth and convenient to handle. Of the Tapering Pails there are five sizes, viz: 1-lb., 4-lb., 7-lb., 13-lb., and 25-lb. Assorted Samples of these will be shipped by express for 75 cents. In quantities, the prices are as follows:

To hold	1-lb.	4-lbs.	7-lbs.	13-lbs.	25-lbs.
Per dozen,	$ .75	$1.25	$ 1.50	$ 2.00	$ 3.25
Per 100,	5.00	8.00	10.00	14.50	23.00

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199, 201, 203 East Randolph St., CHICAGO, ILLS.

Deutsche Buecher,

Ueber Bienenzucht.

Bienen Kultur, oder erfolgreiche Behandlung der Bienen, von Thos. G. Newman. Dieſes Pamphlet enthält Belehrungen über folgende Gegenſtände—Oertlichkeit des Bienenſtandes—Honig pflanzen—Erziehung der Königin—Füttern — Schwärmen — Ableger—Verſetzen—Italieniſiren—Zuſetzer von Königinnen—Ausziehen—Bienen behandeln und beruhigen; weiter enthält es ein Kapitel, worin die neueſte Methode für die Herrichtung des Honigs für den Handel beſchrieben iſt. Preis 40 Cents.

Das Pferd und ſeine Krankheiten—Von B. J. Kendall, M. D., enthaltend ein alphabetiſch geordnetes Verzeichniſs der verſchiedenen Pferdekrankheiten, ſammt den Urſachen, Symptomen und der richtigen Behandlung derſelben; ferner, eine Sammlung werthvoller Rezepte. Preis 25 Cents.

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THIS **MARKET** is a large one, with fine prospects of becoming the **Leading Honey Market** of this country, and I take pleasure in announcing that I am now in position to obtain **full market prices** for comb and extracted-honey, at all times. Correspondence solicited.

J. A. LAMON, 44-46 S. Water St., CHICAGO.
22A26t

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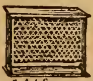
PATENT WIRED COMB FOUNDATION
HAS NO SAG IN BROOD FRAMES.

THIN FLAT BOTTOM FOUNDATION
Has no Fish-bone in Surplus Honey.



Being the cleanest is usually worked the quickest of any Foundation made.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Montgomery Co., N. Y.
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Mention the American Bee Journal.

FIGURES NEVER LIE, BUT MEN WILL MAKE MISTAKES.

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(ARITHMETIC MADE EASY.)

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Or, we will mail the No. 2 Calculator, and give credit for the BEE JOURNAL for one year for $1.75.

THOMAS G. NEWMAN & SON,
199 Randolph Street, CHICAGO, ILL.

THE AMERICAN BEE JOURNAL CIRCULATES ALL OVER THE WORLD

PUBLISHED BY
THOS. G. NEWMAN & SON,
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Club Rates,—Two copies, **$1.90** ; 3 copies, **$2.70** ; 4 copies, **$3.40** ; 5 copies, **$4.00** ; 10 copies, **$7.50**. Mailed to any addresses.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVIII. Nov. 26, 1891. No. 22.

Editorial Buzzings.

'Neath the gray skies of November
The heart may still be gay
If with joy it can remember
The radiant sky of May.
Though drear and chill
Around the hill,
The wild wind moans all day,
If hearts are glad
Though skies are sad,
We cannot mourn for May.

◆

Thanksgiving, the first Winter holiday, occurs to-day. A month later Christmas will be here with its festive cheer and general rejoicing. Then, a week later, comes New Year's Day, when we must all turn over a new leaf.

◆

The Root family is getting well "rooted." The latest additional *root* being "Howard Root Calvert," a 9-pound grandson of A. I. Root, born on Nov. 13, 1891. Mr. John T. Calvert, manager of the factory, married Mr. Root's eldest daughter, and Howard is their son. Congratulations to father and mother

The Feast, last week, was well attended by the "wheel-horses" of the pursuit. There were but few except the veterans there. They were in good trim, and enjoyed the meeting very much.

We regret to state that after the first session we were compelled to be absent most of the time—struck down just as the feast began—and *La Grippe* was the cause of it. We had made all arrangements for the meeting, and naturally expected to enjoy the reunion.

◆

We Were pleased to meet Brother A. I. Root at the convention. He looks better than we expected after his illness. He goes to California to recuperate, and our best wishes go with him. We wish we could have such a vacation.

◆

Bro. W. Z. Hutchinson, the efficient Secretary of the Northwestern Bee-Keepers' Society, is also a stenographer. Knowing his ability and peculiar adaptation for reporting the proceedings of a bee convention, we engaged his services for that purpose, and our readers will have the pleasure of perusing such, beginning next week. We are glad to say that his health is excellent, and that he is, as usual, brimful of good nature and pleasant smiles. His valuable bee-periodical, the *Review*, has passed the stage of experiment, and is now a prosperous and permanent concern. We congratulate him on its success.

◆

Among the large consumers of honey, we may mention the fancy bakeries, and their purchases are increasing in volume every year. We lately had an interview with the "buyer" of one of these manufactories, who informed us that his purchases of extracted-honey this year has amounted to $13,000, and that was an advance of about one-fifth over the previous year. This bakery is distant only about five blocks from the office of the AMERICAN BEE JOURNAL.

Programme of the North American Bee-Keepers' Association, to be held in Agricultural Hall, Albany, N. Y., Dec. 8 to 11. December 8 will be an informal meeting.

FIRST DAY.

Wednesday, Dec. 9, 9 a.m. President's Address.—P. H. Elwood, Starkville, N. Y.

Appointment of committees, and routine business.

10:30 a.m. Some of the Newer Races of Bees—Frank Benton, Washington, D. C. Discussion. Question-box.

2 p.m. The Prevention of Swarming.—W. F. Clarke, Guelph, Ontario, Canada. Discussion: The prevention and control of swarming.

3:30 p.m. The Italian Bee. What are the principal points of excellence, and to which qualities should we give the preference, with a scale of markings as for neat stock?—Geo. H. Knickerbocker, Pine Plains, N. Y. Discussion. Question-box.

7:30 p.m. The Outlook for Apiculture at the Columbian Exposition.—A.B. Mason, Auburndale, O. Discussion.

SECOND DAY.

Thursday, Dec. 10, 9 a.m. Election of officers. Selection of next place of meeting. Business of the association. Volunteer contributions.

10:30 a.m. Discussion: Prices and uses of honey and sugar. Question-box.

2 p.m. Can we Settle upon Two Sizes of Sections as Standard?—C. C. Miller, Marengo, Ills. Discussion: What the Market demands for Packages and Grading. To be participated in by honey merchants and bee-keepers.

3:30 p.m. Discussion: What ought the Department of Agriculture to do in Apiculture? Question-box.

7:30 p.m. The Bees, the Location, and the Apiarist.—G. M. Doolittle, Borodino, N. Y. Discussion: Should Bee-Keeping be Made a Specialty?

THIRD DAY.

Friday, Dec. 11, 9 a.m. Some Facts Not Generally Known About Rendering Beeswax.—R. F. Holtermann, Brantford, Ontario. Discussion: Rendering and Purifying Beeswax, and Making Comb-Foundation Sheets.

10:30 a.m. Reports of Committees, and Unfinished Business. Adjournment.

Reduced Rates on Railroads.

One and one-third regular fare for round trip. The concession is for delegates and others going to Albany to attend the North American Bee-Keepers' Convention, Dec. 8–11, 1891, from the following described trunk-line territory:

By Central Traffic Association from St. Louis and nearly all points in Illinois, Indiana, Ohio, Pennsylvania, as far east as Pittsburg; New York, as far east as Salamanca; and Ontario, Canada, as far north as Toronto.

By the Trunk Line Association, which includes the remainder of New York, Pennsylvania, and New Jersey; and the Southern Passenger Association, which includes all the principal roads in the Southern States.

Bee-keepers from Vermont can obtain reduced rates over the Delaware & Hudson Canal Co. R. R., which can be conveniently taken at Addison Junction or Ticonderoga, N. Y., or at Rutland, Vt.

Instructions to Persons Attending the Meeting.

1. The concession is for delegates and others going to Albany from any of the above described trunk-line territory.

2. If the starting point is located on some small road, or one not in either of the three trunk-line associations making the concession, tickets should be purchased only to the most convenient place where a trunk-line certificate can be obtained, and thence by direct routes only, through to the place of meeting.

3. The going ticket must be purchased within three days before, or not more than three days after, the opening date of the meeting, otherwise no reduction in fare will be made on the return passage.

4. Each person availing himself of the concession will pay full tariff fare going to the meeting, and get a certificate filled in on one side by the agent of whom the ticket is purchased. (The agents keep the certificates in stock.)

5. Present the certificate to the Secretary at the meeting, that the other side may be filled in. Certificates are not transferable.

6. On presentation of the certificate, duly filled in on both sides, within three days (Sunday excepted) after the adjournment of the meeting, the ticket agent at Albany will return the person to his starting point at one-third regular fare. The return ticket will be issued over the route used in going to meeting, and will be available for continuous passage only.

Very Important.

7. It is absolutely necessary for each passenger, before starting, to obtain a certificate from the ticket agent at the point at which the going ticket is pur-

chased, otherwise the passenger will be unable to obtain special rate for return journey, and will be obliged to pay full tariff rates in both directions.

8. Delegates, and others availing themselves of the concession, should present themselves at the office for certificates and tickets at least 30 minutes before the departure of trains.

9. Every person attending the meeting should get a certificate, no matter how short the distance, as, the more certificates are signed at the meeting, the easier it will be to secure reduced rates another year.

For hotel rates, see Convention Notice, on page 682 of this issue.

◆

Prof. Cook and family passed through this city last Thursday, while the Northwestern Convention was in session, but could not remain long enough to put in an appearance, and "see the boys" even for a moment. This was to be regretted, for he would have had a hearty welcome. He goes to California to spend the Winter, for the benefit of his health. We hope for his return in the Spring full of vigor, and in excellent health.

◆

That New bee-periodical started in Minnesota now proposes to change its name to the "Northwestern Bee Journal." That is somewhat more distinctive, but why use the name by which our periodical has been known for 30 years, when there are abundance of names not used in connection with bees? Say Magazine, Exchange, Examiner, Gazette, Herald, and lots of others. There can be no excuse for using a name already appropriated! Call it something else.

◆

Our Third annual attack of *La Grippe* makes it necessary to cancel all our engagements at conventions this Fall and Winter. Much as we regret it, necessity compels this announcement. We must reserve all our strength for the BEE JOURNAL. *La Grippe* leaves so many dire results that it cannot be trifled with.

The Eastern Iowa Bee-Keepers' Association will hold its third annual convention in the Opera House at De Witt, Iowa, on Dec. 2 and 3, 1891. In the programme we notice the following essays:

Bees and the Farm—J. M. Fitzgerald, Maquoketa.

To What Extent Should Bees Increase?—Mr. Baldwin, Wyoming.

Spring Dwindling—W. E. Coe, Clarence.

Production of Comb-Honey—Conrad Kuebler, Calamus.

Production of Extracted-Honey—Chas. Lias, Bellevue.

Preparing Bees for Winter—H. Ehrensberger, Preston.

Proper Distance Between Frames—Number of Frames in Hive and Depth—How to Prevent Swarming—Discussion by Club—Shipping Crates.—Ed. Petch, Maquoketa.

Bee-Keeping as an Occupation for Women—Maude Meredith.

Address on Bee-Culture—L. W. Stewart, Monmouth.

Will it Pay to Make Attractive Exhibits at Fairs—By the Expert Judge of the Iowa State Fair, and of the St. Louis Fair, L. G. Clute, Greeley.

Best Section Case—Discussion by the Club.

Management of Apiary in Spring and Summer—H. Stewart, Prophetstown, Ill.

Is Careful Breeding Necessary?—N. Steininger, Tipton.

Explanation of Hives and Bee-Fixtures—Discussion by the Club.

How Many Bees are Necessary to Winter Properly?—H. C. Bowman, Maquoketa.

When Should Bees be Put into Cellars?—L. J. Pierce, DeWitt.

◆

A. C. Tyrrel, of Madison, Nebr., has more colonies of bees than all other bee-keepers in the county combined. He has been for some years "Clerk of the District Court," and we are pleased to note that he has just been re-elected to that office by nearly double the number of votes given to his opponents. His efficiency was fully recognized, and duly rewarded. His bees will receive attention in future as in the past, and we hope that his honey crop for 1892 will exceed all former years.

The National Flower.

CHARLOTTE E. WARNER.

The National Flower! What shall it be?
Wind whisper it softly to me.
"Not the Arbutus, lovely and shy,
Hiding its head from even the sky,
Only loving the quiet nooks,
The song of birds, of rippling brooks,
In some lonely, shady glen,
Away from the busy haunts of men,
Exhaling there the breath of Spring,
To Winter's graves sweet offering;
Too short thy life, thy flowers too rare
For a whole Nation's claim to share."

"Not the Laurel, whose glossy leaves
So soft adorn the festal wreaths,
Or round the victor's brow entwine
As tribute to his gifts divine.
Long ages past the laurel's been
Emblem of greatness unto men.
The Nation's flower should know no state—
No rich, no poor, no small, no great—
The laurel, then, men fain must see,
The Nation's Flower can never be."

Wind, wilt thou whisper again to me,
The National Flower, what shall it be?
"Something that grows without thought or care,
Springing up by the wayside everywhere,
Cheering the weary heart passing by,
Reflecting the sunlight unconsciously.
Surely, bright Golden-rod it must be you!
Suggestive the rod, unless men be true;
Suggestive the gold; pure deeps must men shower
Along the world's wayside—thou art the flower." —Good Housekeeper.

BIOGRAPHICAL.

HON. J. M. HAMBAUGH.

The subject of this brief sketch is one of the men of whom the State of Illinois is proud. His career in the last Legislature, as a representative from the 36th District, has made a national reputation for him as a champion for the rights and privileges of apiarists.

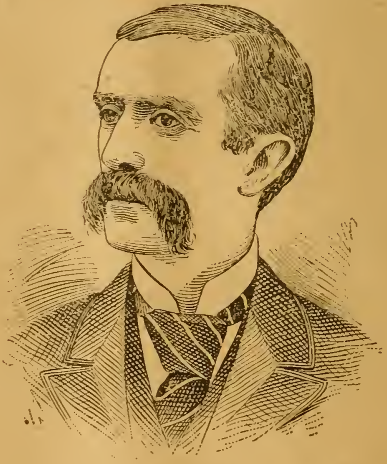
During the present year the BEE JOURNAL has contained the full text of the bills he has championed, and has often referred to the successful work he has done in the Legislative halls of Illinois, and we need not here repeat them.

His father, S. D. Hambaugh, represented the same District from 1842 to 1844, and the son is therefore an honor to the father as well as the State.

Mr. Hambaugh was elected on the Democratic ticket, but has a large agricultural constituency. He has given entire satisfaction to the electors of his District, and will in all probability be re-elected, should he accept the nomination.

In the Legislature he labored incessantly for the measures which he championed, but refuses to attribute their success to his individual labors, preferring to share the honors with the hosts of friends, who rendered cheerful assistance, and labored for their enactment.

Mr. Hambaugh's ancestry on his mother's side came from the old English Puritan stock, the descendants of which gave us a President in the person of Chester A. Arthur.


HON. J. M. HAMBAUGH.

We have procured the following facts from "one who knows him well," and feel sure that they will be interesting to our readers:

Joseph Mirando Hambaugh was born in Versailles Township, Brown County, Ills., on July 16, 1846, hence is over 45 years of age. His father, Stephen D. Hambaugh, emigrated from Kentucky, and pre-empted the land now occupied as a homestead by his son, in the year 1828, being one of the very first settlers of that section of the country.

At that time there was not a railroad in the State of Illinois, and but few in the United States.

Stephen D. Hambaugh was united in marriage to Miss Elmina Stone on the eve of Dec. 28, 1830, being the night of the commencement of the fall of the celebrated deep snow, so historical and memorable in the minds of the old settlers, the snow having fallen to a depth of 4 feet on the level, and remaining upon the ground until near the first of April, ere the face of mother earth was again revealed, and the anecdotes and stories told of the trials and sufferings of the early-day pioneers would fill volumes.

Nestling among the trees in the somber recesses of the forest, where scarcely a ray of sunshine could penetrate, Mr. Hambaugh had built his hut, which was in keeping with its rude surroundings—a cabin of logs, with a fireplace and chimney built of mud, puncheons and sticks—and it was to this rude structure that Mr. Hambaugh introduced his newly-wedded wife, to share his lot in the miseries and pleasures coincident with a truly pioneer life.

They were the advance guards of the on-coming tide of civilization. The screams and howls of the wild beasts were made to give way to the sound of the woodman's ax, and in place of a harbor for wolves, wild cats, and legions of other varmints, the forests melted into fields of waving grain, and the rudely constructed log cabins gave way to more spacious frame structures.

With nerves of steel they have endured privations and sufferings, to clean up the rubbish, that the coming generations might live to enjoy the " promised land," that should "flow with milk and honey."

They have caused the land to "blossom as the rose," and "made possible the deeds of to-day." Would it not be a meritorious idea to build a monument to their memory ?

It was during the Winters of the first years of his pioneer experience that Mr. Hambaugh obtained a few colonies of bees from hollow trees, by felling them, and sawing above and below the colony, covering one end with boards, and mounting them upon platforms or puncheons, prepared for the purpose, and then transporting them to his cabin on a sled. In this way the first bees were obtained, from which he increased their numbers year by year, until they reached as many as 50 or 60 colonies.

The hive used was very primitive, and the method of taking the honey was with the brimstone match, but queer as this may seem the wax and honey product entered largely as a financial factor into the success of the early settlers, and many a hearthstone has been made happy by the timely exchange of their product for Linsey, jeans, and other timely commodities. One settler in that community states that he paid for 80 acres of land in early times with money obtained from beeswax and honey.

Mr. and Mrs. Hambaugh had seven children born to them, four of whom are still living, Joseph M. being the youngest, and in the changing vicissitudes of life, it has fallen to his lot to remain upon the old homestead, to look after the fences and the bees.

Having inherited a passionate fondness for the wonderful little insect, like his father, he declares that the old homestead will never be deprived of their merry hum ; but it was not until about the year 1881, that he began to study modern methods, and prepare for a new era in bee-culture. Up to that time he had never seen the inside of a bee-book, and while he had been taught that bees had a queen, which was the "mother of the flock," that was the full extent of his knowledge of the parathenogenesis of the honey-bee.

He had also learned to produce honey in small boxes, and a little circumstance led him to an investigation, and that investigation was a ray of light shed upon a new field of labor, grand and beautiful beyond description.

It was in the Fall of 1881, that, chancing to step into the grocery house of J. A. Givins, in Mt. Sterling, he discovered a huge pyramid of beautiful white clover honey, put up in one and two-pound sections, and upon inquiry he found they had been produced by a citizen of his own county, by the name of Dunbar. This was an eye-opener to him. He immediately sought an interview with Mr. Dunbar, and learned something of his methods, but soon found that in order to be a successful honey-producer one must study the art.

About this time he read A. I. Root's advertisement in an agricultural paper, and sent for his catalogue of bee-supplies, and this led to a purchase of his A, B, C in Bee-Culture, followed by Cook's Manual of the Apiary, Dzierzon's Rational Bee-Keeping, and many other works of note, and it was after a careful perusal of these works that he ventured on modern improved methods.

The following Spring found him transferring his bees from the box-hives to 8-frame hives of an original simplicity pattern. This proved quite an expensive experiment to him. That season the increase was from 8 colonies, Spring count, to about 21 colonies, and the Spring of 1883 found him with 17 colonies, two of which sent out no swarms, and from the remaining 15 colonies he hived 43 swarms of bees, coming through the season with a grand total of 60 colonies of bees, and about 200 pounds of honey.

Subsequent investigations, and this little piece of experience, led him to the adoption of a hive of larger capacity, and the following Spring found him equipped with buzz saws and other appropriate machinery for accurate work, and a large lot of 10-frame simplicity hives, having frames 17⅝ by 9⅛, and now came an interesting feature in his experience: It was found that the top-bars of the frames in the old 8-frame hives were all too long, and had to be trimmed ere they would go into the new hives. Each and every colony had to be carried into the honey-room, and as they were transferred, every comb, bees and all, had to be inverted into a frame work prepared for this purpose, and the ends clipped with a tenon saw, in order to make a uniform frame throughout the yard.

Mr. Hambaugh now began his work as an apiarist in earnest, but as a comb-honey producer he could never solve the increase problem, and not until frequent communications and visits to the Dadants, and noting their success as extracted-honey producers, did he become convinced of the feasibility of their ideas and plans, which he still adheres to, believing them to be the most economical, simple, and, when strictly followed, sure to be rewarded with a greater degree of success, financially, than any other method extant.

Mr. Hambaugh handles about an equal number of simplicity and Dadant hives, and he gives a decided preference to the Dadant hive for extracting purposes. His success as a honey-producer is well known throughout the country.

We might give other items of interest, but space forbids.

◆

The Missouri *Bee-Keeper* for October and November, in one number, contained the report of the State Convention, which we present this week. Brother Quigley remarked that "those present at the meeting seemed to enjoy themselves." It certainly was a very lively meeting, judging by the report. It is worth a careful perusal.

Convention Notices.

☞ The next annual meeting of the Rock River Bee-Keepers' Association will be held at Sterling, Ills., on Thursday, Dec. 3, 1891.
J. M. BURTCH, Sec., Morrison, Ills.

☞ The annual meeting of the Colorado State Bee-Keepers' Association will be held in Denver, Jan. 18 and 19, 1892.
H. KNIGHT, Sec., Littleton, Colo.

☞ The Michigan State Bee-Keepers' Association will meet in Grand Rapids, Mich., on Thursday, Dec. 31, 1891, and Friday, Jan. 1, 1892, GEO. E. HILTON, Sec., Fremont, Mich.

☞ The Illinois State Bee-Keepers' Association will meet in Springfield, Ills., on Wednesday and Thursday, Dec. 16 and 17, 1891.
JAS. A. STONE, Sec., Bradfordton, Ills.

☞ The Eastern Iowa Bee-Keepers' Association will meet in De Witt, Iowa, on Wednesday and Thursday, Dec. 2 and 3, 1891.
FRANK COVERDALE, Sec., Welton, Iowa.

☞ The Kansas State Bee-Keepers' Association will hold their second annual meeting at Beloit, Kan., on Dec. 8 and 9, with the State Horticultural Association. All the bee-keepers of the State are cordially invited to attend.
L. WAYMAN, Sec., Chanute, Kan.

☞ The Eastern New York Bee-Keepers Association will meet in convention with the North American Association, Dec. 8 to 11, in Agricultural Hall, Albany, N. Y.
W. S. WARD, Sec., Fuller's Station, N. Y.

☞ The Huron, Tuscola and Sanilac Counties Bee-Keepers' Association will meet at Concordia Hall, Sebewaing, Mich., on Dec. 15, 1891. All interested are cordially invited to attend, and help make this one of the best meetings ever held by this association.
JNO. G. KUNDINGER, Sec., Kilmanagh, Mich.

☞ A special session of the California Bee-Keepers' Association, in honor of the visit of Prof. A. J. Cook and A. I. Root, will be held in Los Angeles, Calif., at the Chamber of Commerce, Jan. 6 and 7, 1892. The California permanent exhibit in an adjoining room, will no doubt be of interest to all.
C. W. ABBOTT, Prest.
G. W. BRODBECK, Sec.

☞ The North American Bee-Keepers' Association will hold its annual convention in the Agricultural Hall, at Albany, N. Y., from Dec. 8 to 11, 1891. The hotel reduced terms are as follows: Globe Hotel, $2 per day; American Hotel, $2; Cox Brothers, No. 4 William st., $1; W. H. Keeler, 488 Broadway, European plan, rooms 50 cts., 75 cts., and $1; Kimbal House, 69 Washington st., $1; Merchants Hotel, 497 Broadway, $2; I. Keeler, restaurant, 56 State st.; Odel Restaurant, 94 State st. Reduced railroad rates have been secured from Chicago and the Mississippi River and from the South. Every local and State association should send one or more delegates. Those who intend to be present should send their names either to the President or Secretary. The programme will be issued soon, giving all particulars.
P. H. ELWOOD, Pres., Starkville, N. Y.
C. P. DADANT, Sec., Hamilton, Ills.

Queries and Replies.

Cardinal Points in Bee-Keeping.

QUERY 794.—What are the 5 cardinal points in bee-keeping?—New York.

I do not know.—C. C. MILLER.

Strong colonies at dawn of harvest.—A. J. COOK.

Three points will express it: Bees—pasturage—a bee-master.—E. SECOR.

These cardinal points can be summed up in two: To know what to do, and do it in time—DADANT & SON.

Good queens. With good queens a good bee-keeper will look after the other points.—H. D. CUTTING.

1. Entomology. 2. Botany. 3. Queen-rearing. 4. Mechanics—invention. 5. Pluck, gumption and greenbacks.—J. W. TEFFT.

As there are about as many "5 cardinal points in bee-keeping" as there are bee-keepers, I cannot answer.—J. P. H. BROWN.

1. The bee-keeper. 2. Strain of bees. 3. Hive and fixtures. 4. Location. 5. Market and shipping facilities.—C. H. DIBBERN.

The man, the location, strong colonies at the time of honey-flow, best strain of bees, and a hive adapted to the wants of the man and bees.—G. M. DOOLITTLE.

1. Winter well. 2. Vigorous queens. 3. Strong colonies. 4. Good hives. 5. Good judgment in managing bees, and selling the product.—MRS. L. HARRISON.

1. Spring protection. 2. Large brood-nests in Spring. 3. Small brood-nests during the harvest. 4. Plenty of surplus room. 5. Plenty of stores for Winter and Spring.—G. L. TINKER.

I am at a loss to know what is meant by cardinal points. I can only guess. 1. A man or woman that has "gumption." 2. A good movable-frame hive. 3. A good location where forage is abundant. 4. A good race of bees. 5. Industry and close attention to the needs of the hour.—M. MAHIN.

I was not aware that there were 5 cardinal points in bee-keeping, but 5 points can be named that are essential in securing the best results. For instance, a person qualified for the business; a good location; the proper number of colonies of bees kept strong; the best appliances; everything done at the proper time.—A. B. MASON.

1. Perfect wintering. 2. Plenty of food during the Spring months. 3. Unlimited nectar-yielding pasturage during surplus gathering. 4. A man who will give the proper space for surplus. 5. Perfect wintering.—R. L. TAYLOR.

1. Have all necessary supplies at hand in early Spring for the Summer's work. 2. Good, prolific queens from a choice strain of Italians. 3. Hives easily adapted to the needs of weak or strong colonies. 4. A location that has an abundance of white clover and other honey-producing plants. 5. Keep your colonies strong.—J. M. HAMBAUGH.

1. Select a good field, and keep it all to yourself. 2. Get bees enough to stock it. 3. Keep them in hives that can he handled rapidly. 4. Ripe honey, put up in attractive form. 5. Watch the market, and hustle around and sell honey at the right time, and at the right place. Some will give us the old chestnut, keep your colonies strong. Any one knows enough for that.—JAMES HEDDON.

I never heard of the 5 cardinal points in bee-keeping. I should say that there were many more than five. To learn bee-keeping thoroughly, one should study the best works on bee-culture, in connection with practical work in the apiary, subscribing and paying for the AMERICAN BEE JOURNAL and other bee-periodicals, in order to keep abreast of the times, and you will soon know all the points, cardinal or otherwise.—J. E. POND.

I should think that there are at least five times five "cardinal points in bee-keeping." And you might begin with "adaptability of person," and end with adaptability of person. I think it depends altogether on the man as to whether bee-keeping will be made a success as far as the rickitty business admits of success. We think that there is one cardinal point—"adaptability"—and you may repeat it five times if you like, and you will have my answer.—G. W. DEMAREE.

Probably the author of the question meant principal for "cardinal." The cardinal points in geography are the principal points of the compass—north, south, east and west—just four, not five. In bee-keeping, the principal requirements are good bees, plentiful pasturage, suitable climate, proximity to a good market, and an energetic bee-keeper who understands how to manage bees, and market the product.—THE EDITOR.

OUR THANKSGIVING.

MRS. J. E. AKERS.

Oh, give thanks for the Summer and Winter,
Give thanks for the sunshine and rain,
For the flowers, the fruits, and the grasses,
And the bountiful harvest of grain ;
For the winds that sweep over our prairies,
Distributing vigor and health,
Oh, give thanks to our Heavenly Father
For Nature's abundance of wealth.

Oh,give thanks for loved friends and relations,
For sweet converse with those that are dear;
Give thanks for our country's salvation
From famine and war the past year ;
That while kingdoms and empires have fallen,
Our Government firmly has stood,
Oh, give thanks to our Heavenly Father,
For all this abundance of good.

Hamline, Minn.

Topics of Interest.

Honey Yield of the United States.

W. J. DAVIS, 1ST.

The AMERICAN BEE JOURNAL of Nov. 12 is just at hand, and is as interesting as ever. I wish to correct an article on page 624, which I consider very misleading, the more to be deplored as it was written for publication in Germany.

The statement which is at such variance with truth is found near the bottom of first column, page 624, as follows: "For in ordinary seasons it is no uncommon thing to harvest from 140 to 200 pounds of honey per colony, and experts who have their colonies ready for the honey-flow, have produced as much as 300 pounds per colony."

No industry is permanently benefited by misrepresentation. That 300 pounds, and possibly more of extracted-honey, may have been produced in an exceptionally favorable season, and in an exceptionally good locality where there were forests of basswood, I do not deny. But for an ordinary season to produce 140 to 200 pounds per colony "is no uncommon thing" is not true, and if there be 300,000 bee-keepers in the United States 299,999 will agree with me.

I have kept bees for nearly 50 years. Have not been slow to adopt all the improvements that promised to be of value, and in all that time my largest yield from a single colony was 110 pounds of comb-honey. I have my bees in 4 or 5 apiaries a few miles apart, and rarely allow them to get beyond 300 colonies in all.

I do not think that anybody knows how many bee-keepers there are in the United States. Some one has said that there are 300,000. If these average 20 colonies each, it gives us 6,000,000 colonies of bees.

The amount of honey actually produced is largely guess work ; but it is a fact that the largest yields (east of the Rockies) came from the basswood forests of New York and Michigan, which do not yield honey every year, and laterly from the alfalfa fields of the West.

From quite an extensive correspondence, I am satisfied that Pennsylvania bee-keepers have not realized for the past five years an average of 10 pounds per colony per year.

I have not the least desire to "belittle" the pursuit of apiculture, for I am a specialist. But if I lived in Germany, I would make my way to America by the shortest and quickest route if I saw and believed the statements of Mr. Roese, that, notwithstanding the enormous yields, "more honey goes to waste in the United States for lack of bees to gather it, than is in reality gathered.".

Pennsylvania has vast manufacturing interests, the earth pours out its treasures of oil and gas ; unexhaustible mines of iron and coal add to her wealth, but if the glowing picture of Mr. Roese were true, how soon the wealth of this grand old commonwealth would be in the bee-keepers. But I will say to the rraders of the *Bienenzeitung*, and to the rest of the world, that the bee-keepers of the United States are not the "bondholders" of the nation.

Youngsville, Pa., Nov. 13, 1891.

[We intended to have added a foot-note to Mr. Roese's article, and toned down the figures in question, but it was forgotten until too late.

Mr. Roese was justly indignant, and somewhat excited, and evidently got the extraordinary yields of honey mixed up with the ordinary ones.

If he had used the word "some" instead of *ordinary* in the third line from the bottom of the first column of page 624, no fault would have been found with his defense of American honey-producers.

From the connection it is evident that

he intended to have used that word, and probably in the German letter he did use it; but in translating it, not being as familiar with the fine shades of meaning of the English words, he inadvertantly used the word ordinary. That is a charitable view to take of the matter, and we think a correct one.—Ed.]

Missouri State Convention.

The Missouri State Bee-Keepers' Association was called to order by Vice-President G. P. Morton, at Sedalia, on Oct. 7, at 1 p.m. The Secretary being absent, A. A. Weaver was elected temporary Secretary.

The proceedings of last meeting not being available, a partial report was read from the Missouri *Bee-Keeper*, and approved.

The Secretary's report was read and approved. On roll call, 11 members responded.

The Standing Committee on the World's Fair reported.

The election of officers was deferred to the morning of the second day.

The matter of obtaining an experimental station was considered. It was decided to appoint E. F. Quigley as a committee to investigate and report at the next meeting.

A Lecture to Beginners.

BY G. P. MORTON.

Mr. President, Ladies and Gentlemen:

It becomes my pleasant duty on this occasion to lecture the "beginner in bee-keeping."

There is so much to be said—so much to be offered—on this subject that I hardly know what to say or what to leave out. In almost every line of business, education peculiar to that business is the first requisite to success.

In pointing out the way to beginners in bee-keeping, I must lay stress on this one point, and insist that they *buy* and *read*, *study* and *practice* at least one of the many good books on bee-keeping. Become a constant subscriber for one or two good bee-periodicals, and read them and keep posted on the progress in our profession.

After you have read bee-literature awhile, buy two or three of some one of the many good movable-frame hives that are offered for sale; have them filled with large, early swarms. See and know that each swarm has a vigorous and prolific queen; then attend to each hive and assist the bees in filling the hive with straight and all-worker combs.

Now you will find something that you do not understand, and I will not be present to tell you what to do. Refer to your books and periodicals, and practice what they teach. Do not talk about luck in bee-keeping. Do not worry about moths. Do not say that these things cost too much, and that you have not time to attend to them.

If you once understand the business, it is less trouble and less expense to succeed than to fail. It costs less to do anything right than to do it wrong. But if ill omens follow in your wake in bee-keeping, I would advise you to get out of the business, or not commence in it at all.

While you are advancing thus far in bee-keeping, make other subjects a special and careful study. Learn to know when a colony is queenless by the actions of the bees outside of the hive. Study the succession of honey plants in your neighborhood. Know at any time on what your bees are working. Learn to double up weak colonies, and weed out weak and puny queens.

Commence at the close of one season to prepare your bees for the next. Protect them against the cold of Winter and heat of Summer, and especially do not expect them to winter on the wind.

Review and condense; become a student of apicultural literature. Use movable-frame hives; secure straight combs; keep all colonies strong; study the habits of bees; study the honey-flow and its source; become acquainted with all the modern fixtures and supplies in bee-keeping, and buy only those that will pay; know at all times the exact condition of your bees; allow them plenty of Winter stores, and protect them from the extremes of cold and heat.—G. P. Morton.

J. G. Banning wanted to know how to tell when a colony is queenless?

E. F. Quigley replied: Queenless colonies, in Spring, will not carry pollen.

E. R. Garrett said: That is not safe I have seen them carrying pollen when they were queenless.

John Conser said the best way to detect queenless colonies is to open the hive, and if queenless, the bees will be found running over the frames as if hunting for something, or as if lost.

Mrs. J. M. Null bore testimony to the same.

G. P. Morton said that it might be known by the action of the bees in their flight from the hive. He recommended opening the hive and ascertaining beyond a doubt. He said that the pollen theory was not a safe conclusion.

Mr. Conser said that you would find the bees hunting outside the hive, and pulling at dead bees.

E. R. Garrett—To straighten combs that are crooked, cut the combs and reverse the ends.

Laying Workers.

Mrs. Null wanted to know how to detect laying workers.

G. P. Morton said that a colony with laying workers is one which has been deprived of the queen, and the means of rearing a queen. To detect it you will find a little scattered brood having raised caps, or shot heads, containing drone brood; and sometimes butts of queen-cells, or even a fully developed queen-cell with a drone larva in it.

E. R. Garrett said to get rid of a laying worker, remove the hive some distance from the old stand, shake the bees off in the grass, and set the empty comb and hive back with a queen in, and when the bees return they will accept her.

G. H. Ashworth recommended to uncap the drone brood, and give them a queen.

Miscellaneous.

Uniting bees was discussed freely.

Missouri as compared with other States for honey production, was to have been an essay by A. A. Weaver, but was not ready on account of the statistics not being complete.

The subject was discussed to some extent by Messrs. Banning, Conser and Morton.

Upon the subject of ascertaining the number of colonies of bees in each county, by conferring with the assessors, it was advised that members make an effort in this direction.

Carniolans Compared with Italians.

BY E. F. QUIGLEY.

In comparing the two races, Carniolans and Italians, they were kept in the same yard for three years. With a steady honey-flow, Carniolans stored more surplus honey than the Italians, with about same per cent. of swarms.

In a poor honey season the Italians came out ahead. Italians are as prolific up to the commencement of the honey-flow, but then check brood-rearing, and fill a part of their combs with honey; while the Carniolans keep up brood-rearing until late in the Fall, using up their stores, and in many cases require feeding for Winter.

Carniolans swarm many times when no honey is being gathered.

It is claimed they are very gentle. They may be in their native country, but I did not find them as gentle as Italians. My queens were from the best breeders in this country.

In keeping the two races for three seasons, the Italians gave more honey with less labor and stings.—E. F. Quigley.

This matter was discussed at length. Albino bees were also included.

Italians were considered preferable to all other races.

At 4 p.m. a recess of 30 minutes was taken.

At 4:30 p.m. a question-box was provided.

EVENING SESSION.

The convention was called to order at 7 p.m.

The question-box was opened by a committee appointed to answer the questions, viz.: G. H. Ashworth, J. S. Atkins, and J. W. Clark.

Will inverting frames cause the bees to tear down queen-cells? We think it would.

What encouragement should bee-keepers hold out to farmers to sow honey-producing plants? No inducement unless they are profitable to farmers also.

What are the most certain indications of bees swarming? To see them coming out.

Will bees swarm without drones? Yes.

Has any one tried alfalfa in this country, and with what success? Yes. With varied success.

What is the greatest mistake you have made in bee-keeping this season? Making too big calculations on the honey crop; allowing bees to swarm too much; extracted too late in the season.

Are bees ever a nuisance? No. They are useful in fertilizing all kinds of fruit, besides storing honey.

Bee-Keeping and Other Pursuits.

Can bee-keeping be made profitable in connection with other business, and what other business? was to have been an essay by R. L. Moore. As no essay appeared, the subject was taken up and discussed to some extent. Other pursuits were recommended as follows:

Small fruit, poultry, blacksmithing, country store, hotel, etc.

Condensed by E. F. Quigley; one or the other will suffice.

Adjourned until Oct. 8, 9 a.m.

OCT. 8—MORNING SESSION.

The meeting was called to order by G. P. Morton, and the following officers were elected:

President, G. P. Morton, Prairie Home.

Vice-Presidents: For Central Missouri, John Conser, Sedalia; for Northeast Missouri, J. W. Rouse, Mexico; for Southeast Missouri, J. W. Clark, Clarksburg; for Southwest Missuri, E. R. Garrett, Appleton City; for Northwest Missouri, J. S. Atkins, Missouri City.

Secretary, W. S. Dorn Blaser, Higginsville.

Treasurer, Mrs. J. M. Null, Miami.

E. R. Garrett asked what was the duty of a Vice-President? To look after the interests of the association in his territory.

The report of the Standing Committee on the World's Fair was read, and the committee was granted further time. It was moved and seconded that the chair appoint five members to act as a World's Fair Committee. One month was granted to secure a member near St. Louis.

The appointments on the committee were P. Baldwin, Independence; John Nebel, High Hill; C. C. Clemons, Kansas City; J. G. Banning, Brookfield.

The following were appointed a Committee on Resolutions: E. F. Quigley, E. R. Garrett, and Mrs. J. M. Null.

Bee-Escapes.

G. H. Ashworth thinks they are great labor-saving appliances.

John Conser had tried nearly all kinds, and said that most of them will work well. The Porter lacks ventilation.

The discussion was thus condensed by J. G. Banning: Bee-escapes can be profitably used to reduce the labor of taking off surplus honey.

Preparations for the Honey Harvest.

BY BYRON IIAMS.

"What is the best way to build up colonies to prepare for the honey harvest?"

There is nothing that I can say that will be new to those of you who read the bee-literature of to-day. However, old ideas on the subject will bear repeating.

My time to commence building up colonies for next season's work, is in September.

I would see that all colonies had good, young, prolific queens, and that they had ample room to deposit eggs at that time, to rear plenty of vigorous young bees to keep up the vitality of the colony through Winter and early Spring, and at this time I would see that each colony has honey enough to carry them through not only Winter, but at least until May.

If a colony is populous in bees, I have yet to see that a single ounce of honey is wasted by leaving it with the bees. They want plenty of room for brood, then if there is room for it, 50 pounds of honey will do no harm. I think it was A. D. Ellingwood that said the more honey a colony had the better it wintered, and I agree with him, if other conditions are right.

Now, we are ready for Winter, and here is how I winter my bees: I winter them on the summer stands, and run my bees for extracted-honey. I use the simplicity hive with hanging frames. I mention the above so that you will the better understand details.

First, I raise the rear end of the hive two inches higher than the front. Now take off the cover; take out the extracting frames, or combs, and four inches from the back end of the hive place a lath or strip of any kind across the frames on top; now take shingles (or boards of any kind will do), and fit closely over the brood-frames, having them fit up close in front. If there should be two or three inches of open space left at the back end of the hive, it will be all right; in fact, I prefer it that way.

Over the shingles and the open space at the back end of the hive spread an old burlap sack or old castoff clothing, chaff cushion, or anything that will be warm; cover the boards enough to keep the moisture arising from the bees from freezing on them. Herein lies the success of the plan. The moisture accumulating on the boards, finds its way down and out at the front end of the hive, leaving the bees dry and warm, and consequently healthy.

The opening or space at the back end allows a little ventilation, all that will be needed.

So much for Fall and Winter. Now we come to Spring management, and if the above has been done right, the bees will almost do the rest themselves.

Messrs. Doolittle, Hutchinson, and others recommend an outer case for Spring. Perhaps in their latitude it would be best, but south of latitude 40° I do not think it would pay to use them. What does this convention say about it?

I would leave the top covering on until the latter part of April, or, if cool, until the middle of May. We have too many warm sunshiny days to allow our bees to be shut up in a double-walled hive. The direct rays of the sun on a single-walled hive in our sunny State, warms our bees up, and warns them to be up and doing ere the fields are white with clover; in other words, it makes them "hustle."

The all-important item in Spring management, is plenty of good, wholesome food for brood-rearing. This they must have, or our flowers will bloom in vain, and when a brother bee-keeper asks us about our honey crop, we will only greet him with a shake of the head and a sickly smile.

Just as soon as the weather will permit, every colony should be examined, and combs of sealed honey given to those that need it. Weak colonies and those that are queenless should be united.

How to feed bees that are out of stores, is an unsettled question. A great many believe in daily stimulative feeding, but where one has 100 or 200 colonies, oh, my! It would be too much of a job for me.

Mr. Doolittle says a frame of honey hung outside of the division-board, and the bees allowed to carry it around, is best. We do not all have division-boards, or a hive so constructed that we could use them; then what? I say it is best to see that enough honey is given in the Fall to last to the middle of May.

If some colonies should run out of honey before there is any to gather, by all means feed them. Give them honey if you have it; if not, give sugar syrup. I prefer to fill combs with either honey or syrup, and hang them in the hive. Do this late in the evening to prevent robbing.

A great many bee-keepers object to spreading the brood. In the hands of an experienced apiarist it is only second in importance to feeding, but I would say to beginners, "go slow," I know whereof I speak. I would spread it if the weather is favorable. Just as soon as I found from four to six frames of brood, I would move two frames of brood to the outside of the brood-nest, placing two empty combs next; then the rest of the brood, and the remaining empty combs to the other side.

In from four to eight days, according to the weather, and the condition of the bees, we can spread the brood again, and here we must exercise caution, or we may spread it too much. If the weather is fine, and the colony is an average one, I would divide the combs having brood, placing those with hatching bees out to the side of the hive, and the empty combs in the center. The above is for a 10-frame hive.

If we use a smaller hive, commence sooner—that is, with a less number of combs filled with brood. If there are no cracks in the hives, the entrances are contracted to the right size, and packed warm and snug on top. I do not know of anything more to be done.

I know it pays to draw a frame of brood from a strong colony to help build up a weaker one. Perhaps those of you who have all the colonies you want, could unite weak colonies to better advantage.—BYRON IIAMS.

Adjourned until 1:30 p.m.

Question-Box.

What would be the best plan to build up the bee interests in the State? Stick to your business.

Is it the duty of all bee-keepers to join the National Bee-Keepers' Union? Yes, if they can afford to pay the dues.

Is it right for one bee-keeper to move into the territory of another, who has the pasture fully occupied? He has a right, but it would not be profitable.

Is wooden comb-guides reliable? No. Foundation is better, but costs more.

Will bees winter on honey-dew? Some said yes; others had no experience.

Is it advisable to follow the craze for fancy queens, at high prices? For honey production it is not.

What constitutes a colony of bees? An ordinary hive full of combs, bees and a queen.

Miscellaneous.

The report of the Committee on Resolutions was received and adopted.

Warrensburg was selected as the next place of meeting in April, 1892. The date was left to be fixed by the Executive Committee.

Moved and seconded that the medal of the North American Bee-Keepers' Association be awarded to J. S. Atkins, for the best comb-honey.

Ordered that the Secretary be instructed to purchase books for keeping the business of the association.

The report of the Committee on Resolutions was as follows:

Resolved, That we, the State Bee-Keepers' Association, extend thanks to the people of Sedalia for their interest in our meeting.

Resolved, That we extend thanks to the proprietor of the Sicher Hotel, for hospitality received.

Resolved, That we extend thanks to

the County Court for the use of the court room.

Resolved, That we extend thanks of the association to the press for courtesies received.

Resolved, That we offer our sincere thanks to the retiring officers for their untiring zeal in behalf of the association.

Resolved, That we regret extremely the accident that occurred to Mrs. Schack, and that she and her family have the sincere sympathies of the entire association, and we also hope it may not prove serious.

E. F. QUIGLEY,
E. R. GARRETT,
MRS. J. M. NULL,
Committee.

Maintain Market Prices.

BY MRS. MILTON CONE.

How can we best educate beginners, keeping only a few bees, not to ruin the honey market for those who are making the production of honey a business ?

I think the above is a conundrum as well as a question, and of much importance to bee-keepers of the latter class. I do not know that beginners, or bee-keepers in a small way, may ever be educated so as not to ruin the market. We are too busy to visit each one and try to persuade them to do their duty in the matter ; and the number of them is legion who take no papers devoted to bee-culture, and consequently are not posted concerning the supply and demand, or know the quotation of prices.

We have felt it to be a duty, in consideration of the interests of the business, to encourage at least a price that savors of the "live and let live" principle, and this may be said of the average bee-keeper who makes this business a means of support ; who knows that his time is money ; that the laborer is worthy of his hire, and feels that for value received he should have a reasonable return.

However, the truth confronts us, that dealers will buy as cheaply as they can ; also, that some of them are not as honest as they might be, in representing the market to the party offering honey ; and, so far as we know, the first honey on the market is supplied by these people, in small lots, in all conditions and mixed grades, to the grocery trade first, until a low price is common.

Then the commission men say : "It was the farmers, themselves, who ran the price down. We would rather keep it up. The more we can realize for our consignor the higher our commission, etc."

I see no remedy but this, which has been somewhat satisfactory to us, viz. : to make no offers until the market is cleared of this cheap honey, and until there is an active demand, as there is now.

In July our grocers were very different, when approached in regard to honey, saying : "Oh ! honey is plenty this year. We can buy all we want very cheaply." Now, this apparent plenty has proven a mirage, their cases are empty, and their customers are asking for what they have not. When a bee-keeper of some reputation as a producer of honey comes in, they are ready to hurry up to the front, with a very pleasant greeting, and, in the next breath, asks : "How much honey can we have? We are entirely out, and would be very glad if you would accommodate us."

There is some consolation in knowing that the honey placed on the market at an indifferent price is mostly of an indifferent grade, or at least in an indifferent condition, and the people are getting a little more particular about how the honey looks, as well as how it tastes.

The painstaking producer is not slow to learn that his honey must be clean and attractive, and the person who has had his ideas of the pecuniary resources of the business enlarged by reading a circular, or some glowing account in an agricultural paper, will sooner or later get disgusted after rushing into the market with the first honey he has, for which he receives such small returns.

If enterprising bee-keepers would only do so, the country might be canvassed, and the honey from these small producers bought up to great advantage, it seems to me, not allowing it to reach the market at ruinous prices ; and not until properly classified and put into neat crates.

Some "educating" might be done at our agricultural fairs. Everybody nearly attends during one or more days ; and to the credit of the general public be it said, that very many attend in a spirit to be benefited by the displays, and to learn all they can.

However, our county societies are slow to realize the importance of our pursuit, and as yet offer scarcely any inducement to bee-keepers, to make an attractive display. If we do, we must do so for the love we have for the work, and by the desire to "lend a hand" towards the uplifting of the cause, and the bettering of the general interests of apiarists.

Trusting no one with the display but one who knows the business, not only the A, B, Cs, but the a-b abs as well, and who is willing to instruct, according to his best judgment when opportunity offers.

The question involved herein is one of importance, and yet it is veiled with such misty uncertainties that I feel very uncertain as to whether I have touched any point to advantage. Yet a point may be gained if it starts discussion, and we can get the sense of the convention.

I hope that you will consider the difficulty of the question, and overlook shortcomings.—MRS. MILTON CONE.

A Successful Bee-Keeper.

BY MRS. J. M. NULL.

What are the essential qualities for making a successful bee-keeper?

No doubt "the powers that be" feel highly amused at the very ridiculous predicament in which they have placed me. But as they wield "the whip of authority," when they bring the long lash cracking around my head, I know full well that they expect me to respond, and that, too, in my very best manner.

I may as well confess right here that I feel the utter hopelessness of me, a woman, and one so thoroughly imbued with "Millerism," as to not know that she knows anything, ever indicating to these practical, intelligent and successful veteran bee-keepers the essential elements of success.

At the same time, I feel sure that if I I do have to beat an inglorious retreat, there are those present with large hearts and yet larger intellects, who will bravely come to my rescue.

"What are the essential qualities for making a successful bee-keeper?" There are a number of things to be considered outside of the man. A good location, a good season, a good strain of bees, with a plentiful secretion of nectar.

Then the man must possess every quality that would make him successful in mercantile or professional life. He needs the qualities that would carry him to the front in any other business. First of all, a love for the pursuit which will beget enthusiasm, of which will be naturally born all other necessary qualities.

The first born, I should christen courage—physical and moral.

Physical courage that will banish all fears of stings, or any disastrous results therefrom. Imagine, if you can, the successful jockey who is afraid to handle his own horse; or the teamster, who, through fear, would attempt to harness his frisky mules from the end of a ten-foot pole.

And should the milkmaid stand in fear and trembling, and shrink and cower at each movement of the cow, how long would it be before "old Brindle" would be mistress of the situation? Had man been a slave to that old tyrant fear, think you the grand powers of steam and electricity would ever have been discovered, controlled and utilized?

Moral courage is in demand, to enable us to stand by our rights when they, or our pets, are assailed or maligned. Were it not for the indomitable moral courage of the persecuted, and that noble band of defenders, the managers of the National Bee-Keepers' Union, where would the business of bee-keeping be to-day?

Patience should come next to courage. Patience to endure the attacks of our little pets; always remembering that they are endowed alone with instinct, while we are supposed to possess reason; also, that this very propensity to sting is more of a protection to our calling than any tariff bill ever formulated by man.

We should be armed with patience to handle them humanely, never jarring them unnecessarily, or cruelly crushing them, thereby invoking their just wrath on our hands.

Patience over the ignorance of those who insist that bees soil the clean-washed linen at all times of the year, or that they destroy sound fruit, by stinging it and causing it to rot, or that they interfere with the grazing of stock, etc.

Patience when the different parts of the hive refuse to adjust themselves automatically.

Patience when the help seems entirely oblivious to our interests.

Patience when robbers utterly refuse to be controlled.

Patience over the long days in June when, instead of the eight or ten hour system, we are compelled to adopt a fourteen-hour system, and that, too, with the mercury hovering around one hundred.

Patience when anywhere from 5 to 10 swarms issue at one and the same time, thickening and blackening the air with the flying hosts. Fortunately, we are promised relief right here through the swarm-catcher.

A few years ago I happened to have a very energetic uncle and aunt visiting me during swarming season, who had kept bees in the long ago, and nothwithstanding all my protestations to the contrary, every time a swarm issued they were on hand, with all the force they could command, drawing for that purpose even from the streets, and equipped with tin pans and buckets, created the most unearthly, distracting confusion imaginable.

One of our tinners remarked he never could divine how we managed to wear out so many stew-pan bottoms until then and there revealed.

All this was very trying at the time, but as memory paints those days, I invariably laugh, at least to myself, when good Aunt Mary's earnest face presents itself, and I can almost hear her say, as she did then, "You *must* do something to save your bees."

Women bee-keepers, especially, need patience to brook the jibes and jeers of their own sex, because they are bee-keepers.

Then our endurance is put to a crucial test on the arrival of the high-flying, fashionable caller with a multitude of fine airs, and dressed in the very latest of styles, while we, perchance, are bedaubed from head to foot with wax, honey or propolis—or all of them—but under these conditions do we not ourselves feel considerably "stuck up?"

Again, custom denies to women the privilege of giving vent to their pent-up feelings through profanity, which seems to be a source of great relief to many of the "Lords of Creation."

Mr. Dadant has said ours is a business of details, thus implying the necessity of patience. We need patience over a short crop, or no crop at all, severe Winter losses, foul-brood, etc., but the patience that will endure many defeats, and even hardships, will secure success at last. Adversity, not prosperity, develops and brings to the front all there is in a man.

Some may aver that many of our best bee-keepers are devoid of patience, but I should advise, unless you have a surplus stock of it, do not embark in the business of bee-keeping.

On the other hand, patience must not develop inactivity. "Laziness travels so slowly that poverty soon overtakes him." The young man who thinks of little but fast horses and stylish turnouts; or the young lady whose mind is mostly engrossed by dress and beaux, would, most probably prove failures as bee-keepers.

Our watchword should be, "Eternal vigilance is the price of success." An apiary neglected or mismanaged is worse than a farm overgrown with weeds, or exhausted by ignorant tillage. Yet many, both old and young, will read a book on bee-culture, and then waltz right into the business, just as sure of a golden success as though the book was equal to the lamp of Aladdin, and all they had to do was to rub the leaves and take in the treasure.

Mr. Heddon says that if there is any business in this world that demands industry, skill and tact, to insure success, it is this business of ours. He also says: "The earnest desire of succeeding is almost always a prognostic of success."

But I do not exactly like to quote from him, for, as you are aware, he is not in favor of the gentler sex as bee-keepers. Let me warn you that if any of you are disciples of his, in this respect, do not make things disagreeable by so expressing yourselves.

If an earnest desire of succeeding is a prognostic of success, allow me to ask, as a sex which of the two, women or men, are the most devoted to a cherished cause, or the most ambitious to excel? But as he has done so much to make the business available to women, through the divisible brood-chamber principle, we can readily forgive him, and look forward to the time when our sex, by their works, shall demonstrate to him and the world that he is laboring under a mistake.

The successful bee-keeper must possess an elastic temperament. There are always two sides to everything, and should we feel disposed to repine we should leave the discouraging page and give the leaf a turn and read the other side. If, after reading to the bottom of the page, we feel no better, we might borrow from one of our more favored city friends, their book of Life's Thoughts and Experiences, and read from that the discouragements and trials, the close financial grip ofttimes given them by the fickle god of Fortune, and the many discomforts of city life, hemmed in from the pure air of the country, away from the green fields and forests, compelled to breath the hot, vitiated, smoke-stained air of the crowded city. Think you not we might find solace in the comparison?

The successful bee-keeper must be quick and observant. Scientific knowledge is useful, but practical knowledge is indispensible. He must understand the flora of his locality, and have his colonies booming at the right time. He must be rigidly economical, without being penurious; must be ingenious, and adapt himself to circumstances.

Where is the bee-keeper who feels himself or herself overburdened with sagacity, when in the disposition of his product he has to meet the stratagem of the commercial world, with all of its distrusts, jealousies and rivalries; chief among which is adulterations.

Once more, to be successful we must be progressive. A man who knows all about bees, and does not believe that any more can be gained by reading bee-periodicals, new books, attending conventions, etc., will soon be far behind the age.

Let us each see to it that we belong not to this class. Deliver us from being fossilized. Missouri has within herself all the elements necessary to enable her to rank with any of her sister States. Shall she take a back seat? Fellow bee-keepers, it remains with ourselves. Let us look upon our calling as dealing with one of God's wonders, and try to emulate their persistency, constancy, patience, and in this way, and in no other, shall we merit and gain success. —MRS. J. M. NULL.

Non-Swarming Bee-Hive.

BY JOHN CONSER.

I have before me the Contracted, Queen-Restricted, Non-Swarming Bee-Hive.

Contracted—being eight or less frames, if desired; also expanded by the interchangability of frames, taken from the hatching-box on side or rear of the hive, and set in the brood-chamber to be refilled by the queen with eggs, and allowing the queen more room, thereby getting a booming colony of bees by the time the white clover honey season commences; and the bees are in a humor to work with a will, having no inclination to swarm, because the queen is not cramped in her household duties; meantime the young bees are hatching by the hundreds, and returning to the parent hive from the hatching-box, taking with them the honey from the brood-combs (which were shifted from the hive to the hatching box) to be stored in the sections above the hive proper, from which the combs were taken.

The work is done by interchanging the frames, which can be done in 2 minutes, and it need be done about twice or three times during the season.

Restricted—because the queen cannot pass to the combs that are being emptied of young bees in the hatching-box on account of perforated metal being in her way. This hive is double-walled, having division-boards on the sides, being air tight, having rubber edges set into saw kerfs, and dead-air space at the back; being warmer in Winter and cooler in Summer.

Also, a fixed-frame hive, having a movable rack in the bottom that can be shifted from side to side without taking out a frame, and is held firm by the spacers, being self-spaced; making a loose frame for manipulation, or a fixed frame for hauling to out-apiaries.

Cases being of the full size of the hive, and allowing separators to pass between each section, can be emptied by inverting, leaving but a rim to be used on the top of the hive in Winter, to contain a cushion over the brood-chamber for protection to the bees, and doing away with any packing boxes; cases resting on the wide, thick top-bar frames.

Under these conditions the bees have no desire to swarm, the queen having empty combs at all times in which to lay her eggs, and the colony being continually recruited with young bees from the hatching-box.

I have no use for honey-boards under the case when running for comb-honey, as there are no burr or brace-combs connected with the cases.

In the engraving (see advertisement, page 698), the hatching-box is seen in the left foreground, attached to 3 hives, there being 3 apartments in the hatching-box, separated by air-tight divisions, having rubber edges, set in saw kerfs.

The hatching-box is connected to the hive or hives, by tubes and blocks, the queen-excluding metal being so placed in the side of the block that the bees have free passageway to and from the hive.

If you wish to unite 2 colonies, connect 2 hives by block and tube, after taking away the queen from one hive, and the work is done in so quiet a way that the bees do not know but that they always belonged together.

To feed the bees, set uncapped combs of syrup in an empty hive, connect it to the hive with tube and block, and all the syrup will be taken into the occupied hive, and in so quiet a way that robber bees are not aware that any sweets are being stored.

A five-pointed bee-escape, to get the bees out of the surplus boxes when they are taken off, is also shown in the engraving. This escape will clear surplus boxes in less time than any other bee-escape known, and does not smother the bees; for, as you will observe, the bees can get ventilation all around a 4¼ inch circular plate, on the bottom of the board, and have free escape to the hive below, but a bee cannot return.

Now, in regard to the advantages of the Contracted, Queen-Restricted, Non-

Swarming Bee-Hive: All bee-keepers, having actual practice, can form an opinion when they see the simple methods, and when I tell them that I have been testing this hive by different methods for years; and during the last two years, after perfecting the hive as you see it, I have not had a swarm from any one hive having the attachments connected. I have had 96 sections on most colonies run this season, and almost all the honey I got this Summer was from the non-swarming hives, many colonies finishing 64 sections. I have experimented with 10 of my worst hybrid colonies this season; they were given to swarming at times during the whole honey season, and usually storing very little honey.—John Conser.

—*Missouri Bee-Keeper.*

Wavelets of News.

Remedy for Sore Eyes.

Honey boiled with ants is a remedy for ulcers of the eyes. A poultice, made of honey, flour, and onions, is good for stye in the eyes. Honey dissolved with wax and oil is good for wounds and ulcers (fistula). Honey dissolved in turpentine and oil of laurel cures chaps. Honey and water, taken during an epidemic, prevents contagion.—M. Ensbrunner, in *Le Rucher.*

The Honey of Malta.

It has long been noted for its delicious flavor. A writer in the Mediterranean *Naturalist* says that the flavor is largely due to the extensive crops of sulla (clover) that are annually raised throughout the islands, from which the bees derive the largest portion of their material. It is estimated that to collect one pound of honey from clover, 62,000 heads of clover must be deprived of nectar, and 3,750,000 visits must be made by the bees.—*Exchange.*

Beginners.

We do not hear of many now-a-days who are anxious to go into the bee business. A year or two, such as we have just passed through, has not been very encouraging to new recruits. The bee-keeper who expects to succeed, however, must not get discouraged. In any calling, fortune is sure to favor those who keep everlastingly at it. Certainly the prospect is much better than last year. —C. H. Dibbern, in the *Plowman.*

Look Out for Him!

Do not send money, or anything else, to a man who has recently headed his stationery as follows:

JOHN A. BRIGGMAN,
General Commission Merchant & Broker.
Melons, Potatoes, Apples and Cabbage
in Car Lots a Specialty.
P. O. Box 151.] [Telephone 751.
Columbus, O..............189

And, by the way, do not send honey to *anybody* unless you have first found out from some bank or reliable person that he is trustworthy. After some further investigation we found that he was in Columbus; but when last heard of he was in Pittsburg, probably starting a commission house there.—*Gleanings.*

Cleomella Augustifolia.

I have a pretty plant from W. Z. Frazier, Carrizo Springs, Texas, that interests me. Mr. F. says this is a very valuable bee-plant. It blooms in May, and continues until frost. The bees, he states, are wild after it. He adds that they have had a very dry year, so that all other plants have failed to produce honey; but this has done admirably. He thinks it does its best in a drouth. He says: But for this plant, the bees would have starved.

This pretty plant is *Cleomella Augustifolia.* We see that the very name is suggestive. Cleome and mella make us think of Rocky Mountain bee-plant and honey at the same breath. This plant belongs to the same small family that contains spider-plant and *Cleome Integrifolia*, or Rocky Mountain bee-plant; caper family; *capparidaceæ.*

The name, the family, the fact that it gives a good honey crop when all else fails, and that it seems to do best in a drouth, are all points of interest. Will it grow in the North? Will it hold its own? Will it bloom so long? Will it yield nectar in any and every season? We have arranged to try it here at the station.—A. J. Cook, in *Gleanings.*

Get a Binder, and always have your Bee Journals ready for reference. We will mail you one for 50 cents.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Dec. 2, 3.—Eastern Iowa, at DeWitte.
Frank Coverdale, Sec., Welton, Iowa.

Dec. 3.—Rock River, at Sterling, Ills.
J. M. Burtch, Sec., Morrison, Ills.

Dec. 8, 11.—North American, at Albany, N. Y.
C. P. Dadant, Sec., Hamilton, Ills.

Dec. 8, 11.—Eastern New York, at Albany.
W. S. Ward, Sec., Fuller's Station, N. Y.

Dec. 8, 9.—Kansas State, at Beloit.
L. Wayman, Sec., Chanute, Kan.

Dec. 15.—Huron, Tuscola and Sanilac, at Sebewaing, Mich.
Jno. G. Kundinger, Sec., Kilmanagh, Mich.

Dec. 16, 17—Illinois State, at Springfield.
Jas. A. Stone, Sec., Bradfordton, Ills.

Dec. 31.—Michigan State, at Grand Rapids.
Geo. E. Hilton, Sec., Fremont, Mich.

1892.
Jan. 6, 7.—California State, at Los Angeles.
C. W. Brodbeck, Sec., Los Angeles, Calif.

Jan. 18, 19.—Colorado State, at Denver.
H. Knight, Sec., Littleton, Colo.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

North American Bee-Keepers' Association

President—P. H. Elwood....Starkville, N. Y
Secretary—C. P. Dadant......Hamilton, Ills.

◆

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y and Manager—T. G. Newman, Chicago.

Bee and Honey Gossip.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Census Report on Honey and Wax.

I noticed your comments on page 614, on the census returns of the amount of honey and beeswax produced in the United States. I had carefully weighed my honey and beeswax produced in 1889, to be prepared to answer all questions, and called the attention of the Census official to the matter, and he refused to take them down. Did the Government pretend to take them at all?

O. B. Barrows.

Marshalltown, Iowa, Nov. 13, 1891.

[We cannot yet say whether the Census Bureau took reports on honey and beeswax or not in the census of 1890, for the volumes are not yet received by us, though they were promised as soon as published. If they are not more accurate than those published ten years ago, they will be totally useless, and not worth shelf room.—Ed.]

◆

Bees Prepared for Winter.

My loss in bees was heavy last Winter, and I commenced the season of 1891 with 26 colonies of bees in good condition, which increased to 40 colonies, and all are now packed on the summer stands. The season was the poorest I ever knew, and I was obliged to feed almost a barrel of granulated sugar for Winter stores, the honey crop being 85 pounds, all told.

C. A. Bunch.

Nye, Ind., Nov. 17, 1891.

◆

Compelled to Abandon Bee-Culture.

I am a great lover of bees, but owing to ill health my physician has directed me to abandon bee-culture. My bees are large gray bees, and I think they stand the Winter better than any other variety. The yellow bees do not seem to be so hardy. A number of persons have commenced bee-culture in this neighborhood, but some of them experienced such heavy losses that most of them are quitting the business. I had about 200 pounds of extra quality comb-honey, which sold at 18 cents per pound. Some that I took out of the brood-chamber sold at 15 cents. It all sold quite readily, as honey appears to be scarce.

S. C. Dierdruff.

Yale, Iowa.

◆

Honey-Dew.

My attention was called to an article on page 453, of the Bee Journal, in regard to the use of the word bug-juice. From boyhood I have heard it called honey-dew, and not until recently have I heard the term bug-juice applied to it, and a brother bee-keeper informed me that some noted writer on apicultural matters had, with the aid of the microscope, observed the aphis depositing the secretion on the leaves of trees. If such is the fact, my opinion is that a greater mathematician than lives in our day would be required to compute the numbers of these insects, for during the past year I have noticed the leaves on a large area of timber completely covered with honey-dew.

R. T. Davis.

Decatur, Ills., Oct. 24, 1891.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

ADVERTISING RATES.

20 cents per line of Space, each insertion.

No Advertisement inserted for less than $1.00.

A line of this type will admit about eight words. ONE INCH will contain TWELVE lines.

Editorial Notices, 50 cents per line.
Special Notices, 30 cents per line.

Transient Advertisements must be paid for IN ADVANCE.

DISCOUNTS:

On **10** lines, or more, 4 times, 10%; 8 times, 15%; 13 times, 20%; 26 times, 30%; 52 times, 40%.
On **20** lines, or more, 4 times, 15%; 8 times, 20%; 13 times, 25%; 26 times, 40%; 52 times, 50%.
On **30** lines, or more, 4 times, 20%; 8 times, 25%; 13 times, 30%; 26 times, 50%; 52 times, 60%.
On larger Advertisements, discounts will be stated, upon application.

Advertisements intended for next week must reach this office by Saturday of this week.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

All New subscribers for 1892 will receive the remaining numbers of this year *free*.

◆

To Annual Advertisers.—On all contracts made for the year 1892, we will insert the advertisement as soon as received, and no charge will be made for the insertions this year. The matter may be changed at any time, without cost to the advertiser. "The early bird catches the worm." Write for our terms, and the sooner the contract is made the more free insertions will be given.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The **7** above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75
Orange Judd Farmer	2 00	1 75
Farm, Field and Stockman	2 00	1 75
Prairie Farmer	2 00	1 75
Illustrated Home Journal	1 50	1 35
American Garden	2 50	2 00
Rural New Yorker	2 50	2 00
Nebraska Bee-Keeper	1 50	1 35

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

◆

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

◆

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

◆

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

Well Pleased.

The October number of the HOME JOURNAL came duly, also the premium of $2.00 in cash, for which please accept my thanks. I shall be pleased to answer any inquiries concerning your honorable dealings with me.

Belleville, Pa. KATE M. BOYER.

[Enclose an addressed postal card for reply.—ED.]

We Have only a few Binders left of the large size, for the BEE JOURNALS previous to this year. If you want one, please send at once, before all are gone, as we shall not have any more made. Price, 60 cents.

We Club the American Bee Journal and the Illustrated Home Journal, one year for $1.35. Both of these and Gleanings in Bee Culture, for one year, for $2.15.

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the BEE JOURNAL (with $1.00 to pay for the same), or 2 subscribers to the HOME JOURNAL may be sent instead of one for the BEE JOURNAL.

Pleasant Surprise.

Your draft for $2.00 as a premium for answer to the rebus came to hand to-day, and was a pleasant surprise. On account of the distance from Chicago I feared that I could not get the answer to you in time to be on the first list of names, so that I might obtain the prize. I hope to be as well or better pleased with the perusal of the ILLUSTRATED HOME JOURNAL in my leisure hours.

P. S. GRINDLE.

Brooklyn, Ala., Oct. 29, 1891.

Henry Ward Beecher from the Phrenological point of view, is the opening paper of the *Phrenological Journal and Science of Health*, and in it we learn how much the great preacher craved for power to understand human nature. The editor discusses somewhat ironically That Criminal Type that some scientists are trying to create, and also Convict Labor and Mutual Life Benefit Associations. Price $1.50 a year. The three numbers, October, November and December, 1891, offered on trial, for 25 cents. Address, Fowler & Wells Co., 775 Broadway, New York.

If You Have any honey to sell, get some Honey Almanacs and scatter in your locality. They will sell it all in a very short time. We have a few Almanacs for 1891, which we are selling at half price.

Saved Money.

I received the Union Scales you sent me some time since, and they are "dandies." I asked the price of such in our hardware store, single beam, to weigh 240 pounds, and they said $4.00. I am well pleased with them.

Ionia, Mich. JACOB MOORE.

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

Money in Cabbage and Celery.—"Blood will tell." Good crops cannot be grown with poor strains of seed.

For 16 years Tillinghast's Puget Sound Cabbage, Cauliflower and Celery Seeds have been gaining in popularity. The most extensive growers all over the Union now consider them the best in the world. A catalogue, giving full particulars regarding them, will be sent free to any one interested. When writing for it, enclose 20 cents in silver or postage stamps, and we will also send "HOW TO GROW CABBAGE AND CELERY," a book worth its weight in gold to any grower who has never read it. Address

ISAAC F. TILLINGHAST,

18A16t La Plume, Pa

HONEY AND BEESWAX MARKET.

NEW YORK, Nov. 20.—Demand is limited, and supply sufficient. We quote: Comb—Fancy white, 1-lb., 14@15c; 2-lb., 12c; off grades, 1-lb., 12@13c; 2-lb., 10@11c; buckwheat, 1-lb., 10@11c; 2-lb., 9c. Extracted—Basswood, white clover and California, 6¾@7c; orange bloom, 7@7½c; Southern, 65@70c ⅌ gal. Beeswax, 26@27c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, Nov. 21.—The demand and supply are fair. We quote: White comb, 1lb., 15@16c; dark, 10@12c. Extracted — White, 7c; dark, 5@6c. Beeswax, is in light supply, and demand good, at 23@26c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Nov. 21.—The demand is slow, with good supply, except choice comb. We quote: Choice white comb, 14@16c. Extracted, 5@8c. Beeswax is in good supply and fair demand, at 23@25c for good to choice yellow.
C. F. MUTH & SON,
Cor. Freeman & Central Aves.

NEW YORK, Nov. 20.—Demand for honey is fair, with adequate supply; buckwheat not so plentiful as clover. We quote: Fancy clover, 14@15c; fair, 1℔., 12@13c; buckwheat, 10c. Extracted, 7@7¼c. Beeswax, in fair demand, with adequate supply, at 25@27c.
CHAS. ISRAEL & BROS., 110 Hudson St.

CHICAGO, Nov. 21.—The demand is good for fancy white comb-honey, in 1-℔. sections, at 16c; other grades white, 14@15c. Extracted honey selling slowly, owing to warm weather We quote it at 6½@7½c. Beeswax, in light supply and good demand, at 26@27c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Nov. 21.—Demand is good, with comb in fair and extracted in light supply. We quote: Comb—1-lb. fancy, 15@16c; dark, 12c. Extracted—White, 7@7½c; dark, 5@6c. Beeswax—None in market.
HAMBLIN & BEARSS, 514 Walnut St.

DETROIT, Nov. 20.—The demand for comb-honey is fair and supply moderate. We quote: Comb, 12@13c; extracted, 7@8c. Beeswax in good supply, and light demand, at 25@26c.
M. H. HUNT, Bell Branch, Mich.

CHICAGO, Nov. 21.—Demand is good and supply small of gilt-edged stock. We quote: Choice white comb, 14@16c. Extracted, 6@8c. Beeswax, in light supply, and good demand, at 26@27c. J. A. LAMON, 44-46 S. Water St.

MILWAUKEE, Nov. 20.—Demand not very brisk; supply good, and of better quality. We quote: Comb—choice, 1-lb., 15@16c; fair, 13@14c; dark, 10@12c. Extracted—white, in barrels or kegs, 7@7½c; dark, 6@6½c. Beeswax, 25@28c.
A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO, Nov. 17.—Demand good, supply small. We quote: Comb, 1-lb., 10@13c. Extracted, 5½@6½c. Beeswax, in light supply and good demand, at 23@24c.
SCHACHT, LEMCKE & STEINER,
16 Drumm Street.

NEW YORK, Nov. 20.—Demand moderate, and supply reduced, with no more glassed 1-℔ nor paper cartons, 1-℔. We quote: Comb, 1-℔, 14@15c. Extracted—Basswood, 7¼@7½c; buckwheat, 5½@6¼; Mangrove, 68@75c per gal. Good demand for dark extracted honey. Beeswax, in fair supply, with small demand, at 26@27c.
F. G. STROHMEYER & CO., 122 Water St.

CHICAGO, Nov. 21.—Demand is now good, supply is not heavy. We quote: Comb, best grades, 15@16c. Extracted, 6@8c. Beeswax, 26@27c.
R. A. BURNETT, 161 S. Water St.

BOSTON, Nov. 20.—Demand is good, supply ample. We quote: 1-℔. fancy white comb, 15@16c; extracted, 7@9c. Beeswax, none in market.
BLAKE & RIPLEY, 57 Chatham St.

ALBANY, N. Y., Nov. 20.—Demand is good, and supply liberal. We quote: White comb, 14@16c. Extracted—White, 7½@8½c; dark, 6@6½c. Beeswax, supply light, and demand good at 28@30c.
H. R. WRIGHT, 326-328 Broadway.

NEW YORK, Nov. 20.—Demand is fair, and supply ample, except buckwheat comb. We quote: Fancy white comb, 14@15c; buckwheat, 10@11c. Extracted—Clover and basswood in good demand at 6@8c; buckwheat in demand at 5½@6½c. Beeswax in fair demand at 26@28c.
F. I. SAGE & SON, 183 Reade St.

When Writing a letter be sure to sign it. Too often we get letters with the name of the post-office, but no County or State. One such came recently, and we looked into the Postal Guide and found there were places by that name in 13 States. Be sure to stamp your letter, or it may go to the dead letter office, in Washington, D. C.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line,** for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

WANTED—TO BUY—10,000 pounds choice comb-honey. Address B. WALKER, Capac, Mich., or Glen Haven, Wis. 18Atf

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J. A. LAMON, 44-46 S. Water St., CHICAGO.
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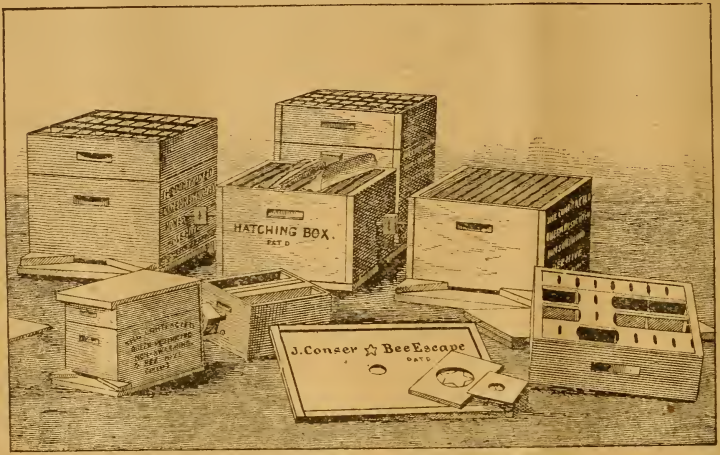
CONTRACTED, QUEEN-RESTRICTED, NON-SWARMING BEE-HIVE

[For full depscription, see page 692.]



PROPOSITION TO APIARISTS.

To bee-keepers wishing to start out-apiaries, or those having the same, I will send a sample hive on trial, with methods and directions for use, they paying freight for the same. All I will ask of them will be to judge its merits, and give me a recommendation. Dr. C. C. Miller, A. I. Root, Henry Alley, G. M. Doolittle, James Heddon, Prof. A. J. Cook, Mrs. Axtell, A. E. Manum, P. L. Viallon, H. R. Boardman, Dr. A. B. Mason, Mrs. L. Harrison, etc. Any of the above-named parties wishing to test my methods, will please write to

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FOR 1891.

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Prices when sent by EXPRESS or FREIGHT: 100 for $2.50; 500 for $10.00; 1,000 for $15.00.

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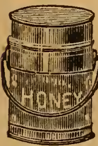
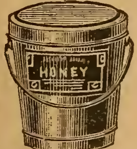
THESE Pails have full covers, and are excellent for selling Honey in the Home Market; and after the Honey granulates in them, it can be shipped anywhere with perfect safety. All sizes have a bail, or handle, and when empty are useful in every household.



The engraving shows STRAIGHT TIN PAILS, of which there are 3 sizes, holding respectively 3, 5 and 10 lbs. of Honey. Assorted Samples of the 3 sizes will be sent by express for 40 cts. In quantities, the prices are:

	Per doz.	Per 100
Gallon, holds 10 lbs	$1.80	$12.00
½-Gallon, holds 5 lbs	1.50	9.00
Quart, holds 3 lbs	1.20	7.00



The second engraving represents THE TAPERING TIN PAILS—made heavier and stronger than those with straight sides. The covers are deeper, and the top-edge of the Pail is doubled over, making it smooth and convenient to handle. Of the Tapering Pails there are five sizes, viz: 1-lb., 4-lb., 7-lb., 13-lb., and 25-lb. Assorted Samples of these will be shipped by express for 75 cents. In quantities, the prices are as follows:

To hold	1-lb.	4-lbs.	7-lbs.	13-lbs.	25-lbs.
Per dozen,	$ .75	$1.25	$ 1.50	$ 2.00	$ 3.25
Per 100,	5.00	8.00	10.00	14.50	23.00

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Our Dovetailed Hive is now the popular one of the day. It takes like **hot cakes,** and is being sold by the carload to all parts of the country.

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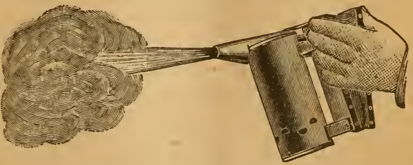
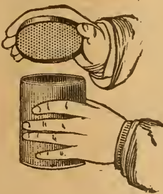
HILL'S BEE-SMOKER AND BEE-FEEDER



Smoker burns hard-wood chips without special preparation. Very reliable. Greatest smoking capacity. Easiest to start. Cheapest, because it saves time. Price, $1.20; by mail, $1.40; per dozen, $10.80.



Best Bee-Feeder. Most convenient. Saves feed. No daubing or drowning. Two to seven Feeders full may be given a colony at one time, which will be stored in the combs in 10 hours. Price, per pair, 30 cents; by mail, 40 cents; per dozen, $1.60. Has a sale of 2,000 per month.

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A. G. HILL, Kendallville, Ind.
26Etf

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COMMERCIAL CALCULATOR

No. 1.

(Revised and Enlarged Edition.)

MERCHANTS
FARMERS
MECHANICS
LABORERS
See Page 68

—WILL—

PREVENT MISTAKES,

RELIEVE THE MIND,

—SAVE—

Labor, Time and Money,

—AND—

DO YOUR RECKONING

In the TWINKLING of an

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THOMAS G. NEWMAN,
EDITOR.

Vol. XXVIII. Dec. 3, 1891. No. 23.

Editorial Buzzings.

The First annual exhibition of the Southwestern Michigan Poultry Association will be held at Kalamazoo, Mich., Dec. 16–19, 1891. O. J. Stone is the Secretary.

Honey was exhibited at the Northwestern Convention from willow herb (*Epilobium*), by George E. Hilton, of Fremont, Mich. It is white, has excellent body, and is very pleasant to the taste.

The California *Bee-Keeper* has not been published since June, but Mr. Styan writes to us that he expects to revive it again in January. Absence from home prevented his giving attention to it for the latter half of the year. It seems to us that California ought to support a bee-periodical, and Mr. Styan made a good paper. Why not give it good support in return?

W. Z. Hutchinson says that there is one point that ought not to be neglected in preparing the bees for Winter, whether in-doors or out, and that is the leaving a space below the combs. When wintered out-of-doors, there ought to be a rim two inches high placed under each hive. This allows the dead bees to drop away from the combs to a place where they will dry up instead of molding between the combs. Then if there is an entrance above the rim there will be no possibility of the entrance becoming clogged. This space under the combs seems to be a wonderful aid in bringing the bees through in fine condition.

The Northwestern was a convention without essays, and it was a charming success. There was no want of subject-matter to discuss, and no lack of enthusiasm. With such a President as Dr. Miller, no essays or programme are ever needed.

A Frame comes from Will Butler, of Denham, Ind., which he calls an "Anti-Honey-Board Frame." It has a thin flat top-bar, and ¼ of an inch below it is nailed a V-shaped strip of wood to which the comb or foundation may be attached. That space above it and below the top-bar is for "Winter passages" for the bees. Mr. Bulter asks: "Would a frame like this do away with burr-combs, and make a good Winter passage?" While it might help, it would not prove an "anti-honey-board" frame. The principal feature—the break-joint principle—is not touched at all. By the division, the top-bar is weakened, and it is less adapted to the needs of the apiarist, both as to strength and also to prevent the breaking of combs. For Winter passages it would work; but all the advantages it offers in that direction can be obtained by using "Hill's device" without weakening the top-bar, and without making any changes in frames.

The Grading of Honey has long been a subject of interest, and it is now one of the *live issues* of the day among apiarists. Disputes often occur, as to the grade to which a certain shipment of honey belongs. The buyer, seller and middle man often disagree, and many times the editor of the American Bee Journal has been called in to decide disputes as to the commercial status of honey already shipped to this city.

When there are no rules for grading honey, it is a very unsatisfactory thing to decide between producer and dealer, or consumer. It is much like deciding as to the beauty of a lot of babies. Each mother naturally and honestly believes hers to be par excellence; but when it comes to "scale" them according to rules, defects are noted; and as a "finality," after dropping many contestants for non-conformity to the scale, the beautiful baby appears in all its charming loveliness.

So with comb-honey—every honey-producer, being more familiar with the appearance of his honey than that of other producers, does not notice the imperfections of sections, crates, etc., and knowing its deliciousness, decides that it belongs to the first grade, and so writes to the commission man. When it arrives, the latter, looking at it only with a commercial eye, sees many defects, and a dispute is the result. The dealer charging the producer with misrepresentation, and the producer charging the dealer with dishonesty. This is just about how it works, and is but a repetition of "complaints" coming to us quite frequently.

Now, an established scale of grading would settle all such matters. There would be no chance for either party to misunderstand "cold facts," and much trouble and ill-feeling would be averted.

We stated these facts at the late Northwestern Convention, and President Miller suggested that the convention should try to formulate a scale for grading comb-honey, and to this end a committee was appointed, consisting of Dr. A. B. Mason, Mrs. L. Harrison, W. Z. Hutchinson, B. Walker, George E. Hilton, M. H. Mandelbaum and M. M. Baldridge.

This committee talked the matter over repeatedly, but came to no conclusion, and finally reported a disagreement.

President Miller, being always ready to harmonize anything coming before a convention, suggested that each member of the committee present to the convention the points submitted to the committee. They did so, and after considerable discussion of the points involved, the following scale for grading comb-honey was adopted:

First Grade.—All sections to be well filled; combs straight, of even thickness, and firmly attached to all four sides; both wood and comb to be unsoiled by travel-stain or otherwise; all the cells sealed, and the honey of uniform color.

Second Grade.—All sections well filled, but with combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain, or otherwise, and the honey of uniform color.

Third Grade.—Sections with wood or comb, or both, travel-stained or otherwise much soiled, and such as are less than three-fourths filled with honey; whether sealed or unsealed, and crates containing two or more colors.

This scale for grading will be submitted for the consideration of the North American Bee-Keepers' Association, at the meeting to be held at Albany, N. Y., next week.

Some persons attempted to confound with this, at the Chicago convention, the idea that white honey *only* can be first-class; but as we understand it, that "has nothing to do with the case." Color does not control the grade; but the points entered in the scale does so, without reference to color. So that there may be a first grade of honey of Spanish-needle, buckwheat, white clover, basswood, etc.

To the Albany convention is submitted this whole matter, and we commend it to the careful and critical consideration of every member present; because if it is adopted there, it will doubtless be the basis upon which all quotations of prices and all sales in the future are made in the honey markets of the United States and Canada.

Dr. A. B. Mason, we regret to learn, upon returning home from Chicago, was put upon "the sick list." His assistant in the Post Office was also taken quite sick on Saturday, Nov. 21. We are glad to announce that both are now improving.

Upon his return a reporter interviewed him, and as the points involved are those now interesting apriarists generally, we copy the article from the Toledo *Blade:*

Dr. A. B. Mason, of this city, probably one of the best known bee-keepers of America, has just returned from Chicago, where he has been to confer with Mr. W. S. Buchanan, the Chief of the Depart- of Agriculture for the Columbian Exposition, in regard to the preparation of an exhibit of bees and honey, and everything used by bee-keepers.

The doctor has been recommended for appointment as Superintendent of the Apiarian Department at the World's Fair in 1893, by the North American Bee-Keepers' Association, and his selection for that position would give universal satisfaction to the bee-keepers.

Mr. Buchanan having been quite an extensive bee-keeper himself, takes a deep interest in the apiarian exhibit, and assured Dr. Mason that he would do all he could to aid the bee-keepers in making a creditable exhibit of their industry, and suggested a plan for an exhibit of bees that was just in accord with the method that had been devised for their exhibition, and the Doctor feels quite elated over the prospects for a grand display.

Dr. Mason, at the last meeting of the North American Bee-Keepers' Association, outlined a plan for the exhibits that has received the endorsement of the bee-keepers, and adopted by all the State societies that have taken action in the matter.

He says that the Illinois bee-keepers tried last Winter to get an appropriation of $5,000 from the Legislature, with which to make their State exhibit, and at the recent meeting of the North-western Bee-Keepers, at Chicago, he said he thought that was not the way to do. His idea is to let the State Bee-Keepers' Associations of the different States have charge of the apiarian exhibit from their State, under the direction of the State Board of Commissioners, and let the State Board pay the expenses, which he thinks ought not to exceed one-half of that sum, and perhaps even less.

The space for the exhibit will, like many other departments, probably be somewhat limited, occupying not more than 300 or 400 feet in length. There will probably be a honey exhibit from fifteen or twenty States, so the space for each will be very small.

In a letter to the Doctor Mr. Buchanan says: "I would suggest that in considering the question of space, it should be borne in mind that in all probability demands will be made in all departments of the exposition for vastly more space than can be assigned, and in my judgment the most careful thought should be given to the question of how best to fully illustrate an industry in the most attractive and thorough manner, in a limited space."

At the Ohio centennial one party occupied 50 feet in length and full width of the allotted space, and the Doctor thinks bee-keepers will be very much disappointed in not being allowed to "spread themselves."

It is intended to have honey in all manner of fanciful shapes, and in all kinds of attractive and beautiful receptacles, so as to call forth from the visitors all the "sweet" expressions of amazement that all the languages of the world are capable of furnishing.

An effort will be made to have a large variety of honey-producing plants growing and in bloom on the grounds.

November brought us 1,587 new subscribers for the ILLUSTRATED HOME JOURNAL. It is a charming success. We will send it and the BEE JOURNAL to any one for 1892 for $1.35. When renewing for the BEE JOURNAL, add 35 cents for the HOME JOURNAL, and you will not regret it. It is fresh, interesting and sparkling, and will bring cheer to your whole household. The January number will be a treasure.

Get a Binder, and always have your BEE JOURNALS ready for reference. We will mail you one for 50 cents.

Queries and Replies.

Ventilation of a Bee-Cellar.

QUERY 795.—1. Should a cellar be ventilated when the bees are in it? 2. If so, what is the best method of ventilating?—Iowa.

My cellar is not ventilated.—G. M. DOOLITTLE.

We give air without light to our bee-cellar, when it is too warm.—DADANT & SON.

I always winter bees on the summer stands, so have no experience in the matter.—J. E. POND.

I could never see any advantage in any kind of ventilation. I close my cellar up tight.—JAMES HEDDON.

1. I think so and practice it. 2. Sub-earth ventilation, with an upper one, to be opened with discretion.—MRS. L. HARRISON.

1. It is well to ventilate, if you can do it without disturbing the bees. 2. I ventilate with a three-light sash, 10x12.—H. D. CUTTING.

1. When the conditions require it. 2. Ventilate farthest away from the bees, so that all will be effected alike.—J. M. HAMBAUGH.

1. Of course it should be ventilated if necessary. 2. Read a chapter on wintering in Cook's Manual, or any recognized authority.—J. P. H. BROWN.

1. Yes. 2. That depends on the kind of a cellar, and its surroundings. The object to be secured is pure air, and an even temperature of about 45°.—M. MAHIN.

Very little ventilation is needed. A 3-inch tin pipe, running from the cellar floor and connecting with the stove-pipe above, is a good arrangement.—C. H. DIBBERN.

1. That depends upon the size of the cellar, and the number of colonies to be wintered in it. 2. A big under-ground drain is as good as any other method.—G. L. TINKER.

Any device that you can control so as to admit the air and exclude it at will, as you can do with your sleeping room if it is properly constructed, I should think would be all that is necessary. I have little faith in anything that acts automatically as a ventilator.—G. W. DEMAREE.

1. It should be arranged so that the bees can have pure air. 2. It depends upon circumstances. If the walls do not admit sufficient air, sub-ventilation may be necessary.—C. C. MILLER.

1. I believe so. 2. If an ordinary house cellar is used, I know of no better way than to have a chimney from the cellar, and a stove set up in the cellar, ready for a fire, if needed.—A. B. MASON.

1. Though I do not think express provision for ventilation necessary, yet it may be convenient for lowering the temperature during warm weather in Spring. 2. By a window and a chimney. —R. L. TAYLOR.

If the temperature can be maintained at the proper range, I think it unnecessary. Otherwise ventilation should be secured either by doors and windows, which are usually sufficient, or by sub-earth ventilation, which is expensive.—A. J. COOK.

1. It depends on the size of the cellar and number of colonies put into it. I do not believe bees in a proper condition need much air in Winter. 2. I have sub-earth ventilation through a 6-inch tile running 200 feet, but I do not know that the bees winter better than before using it.—EUGENE SECOR.

With a well-constructed cellar but little if any ventilation will be required. If ventilation should be deemed necessary for any reason, a chimney will be sufficient to give it. With this and a small screened door or window, the temperature may be regulated at will.—THE EDITOR.

YOU NEED an Apiary Register, and should keep it posted up, so as to be able to know all about any colony of bees in your yard at a moment's notice. It devotes two pages to every colony. You can get one large enough for 50 colonies for a dollar, bound in full leather and postage paid. Send for one before you forget it, and put it to a good use. Let it contain all that you will want to know about your bees—including a cash account. We will send you one large enough for 100 colonies for $1.25; or for 200 colonies for $1.50. *Order one now.*

Topics of Interest.

Foul-Brood Spread by Comb-Foundation.

S. CORNEIL.

In closing my article on the above subject, page 801, I intimated that I was obliged to omit some important matters. I now desire to reply to statements made by those whose views differ from mine, and to offer a reason, which has not hitherto been given to the public, for partial immunity from the disease, when using comb-foundation.

Mr. Root says I am magnifying a molehill into a mountain. I thank him for the admission that there is at least a molehill. He tells us the wax in his tank is kept at 170° to 180°, for days before it is worked up, and he explains that the supply is kept up by putting in a few cakes at a time, the melted wax being dipped out as required. Suppose a cake of wax, rendered in the solar wax extractor, from foul-broody combs, is put into this tank. Perhaps in less than a hour one of the hands from the wax room comes along, and dips out some of the wax melted from this cake. Is this foul-broody wax sterilized by being kept in the tank for less than an hour instead of for days, as is represented by Mr. Root? and was I not correct in saying I had no doubt that foundation is sent out the wax of which has never been heated up to 190°?

Mr. Root emphasizes his statement that "all history of foundation making, and its use are against my argument," and Prof. Cook backs him up when he writes regarding my contention that "experience says no, no." These gentlemen seem to forget that when foul-brood breaks out it is seldom known where the infection comes from. Mr. J. A. Green, for instance, who had over 100 colonies affected by the disease, says "I have not the least idea what caused it." How, I ask, can experience show that the infection does not come through comb-foundation in cases in which it is not definitely known how the disease arises?

When the disease broke out in Mr. Root's own yard he thought it came through feeding purchased honey, but it was only a vague guess. He had no proof that the honey contained the infection, nor did he know that it was extracted from diseased colonies. Since Mr. Root boldly admits that he placed in his hives foundation made from the wax of contaminated combs, I submit that it if more probable that the disease among his bees was caused by using his own foul-broody comb-foundation.

Replying to the editor's foot-notes, I may say that the quotation I used is one taken by Prof. Huxley from a paper contributed by Dr. Roberts of Manchester, to the Royal Society. If, from the data contained in this single experiment, there was sufficient warrant for selecting other periods of time, and working out by calculation the corresponding temperature required to cause sterilization, as is done by the editor, instead of finding them out by direct experiment, Prof. Huxley and Dr. Roberts were quite competent to make such calculations, but they did not do so. Surely "men rush in where angels fear to tread."

The editor writes further as follows "In making comb-foundation the wax is held at over 212° for 24 hours, as shown by Mr. Dadant's statement on page 470." The statement on page 470 to which he alludes is as follows: "We have ascertained that to get rid of all impurities in beeswax we should keep it liquid for at least 24 hours." On the editor's attention being called to his two errors he corrected the first one but for reasons not apparent he allowed the second one to stand. Just why he should desire to keep Mr. Dadant's wax boiling for 24 hours after it is removed from the fire, and set away to cool, is a matter for the editor himself to explain.

It is always a pleasure to notice improvement. A short time ago Mr. Dadant showed that the microbes of wine are killed by a temperature of 140°; from this fact he argued that the spores of foul-brood in wax are certainly destroyed by 150°. This seemed so conclusive at the time that the editor of the AMERICAN BEE JOURNAL metaphorically ran up his colors, inscribed "The Scare is Over," and in "Stray Straws," Dr. Miller reported a decided improvement in his respiration. But since I have shown that there are no spores in wine to be killed, and that Dr. Sternberg found a temperature of 212° necessary to kill the spores of foul-brood in fluid cultures, the temperature of 150° has been abandoned; and 212° is now adopted by my opponents as the maximum temperature necessary for sterilizing wax.

When dry heat and moist heat are spoken of as applied to spores, reference is made to the condition of the spores themselves as regards moisture. If they are in a soaked condition, or in the condition of seeds ready to sprout, they are then most sensitive to the action of heat. But if they are dry and indurated they are not only very obdurate as regards the effect of heat, but they often resist the action of boiling water for hours, because the water does not readily penetrate their desiccated covering.

If the spores in wax were in the sensitive state described above, I frankly admit Mr. Dadant's process would sterilize his wax. Mr. Dadant says they are in this state, and he undertakes to show that not only the spores, but all foreign particles, have the wax with which they are encased, replaced by water during the process of boiling. He says "Our object in melting wax with water is to wet all the particles of extraneous matter to get rid of them. These particles, when soaked with water, are heavier than melted wax, and even the smallest and lightest substances sink to the bottom. Sometimes we find bits of paper which, soaked with wax, are so transparent that it seems impossible to separate the two substances, yet, when our cakes of wax are cold we find the paper altogether clear of wax. Suppose that instead of paper we have a spore of foul-brood; will this spore remain dryer than the paper ?"

Since the gist of the above argument is that the wax in the paper is replaced by water, which causes the paper to sink, and, reasoning by analogy, that the wax with which spores are encased is replaced by water in just the same way; we shall test by experiment the accuracy of Mr. Dadant's observation of the facts.

I cut a slip from the margin of a newspaper which I place in water, and I find that it sinks to the bottom, not because the water it absorbs makes it heavier specifically, but because the paper itself is heavier than water. As wax is lighter than water, clean dry paper should sink in melted wax, even more readily than it does in water. I next place pieces of dry paper in melted wax, and, as was expected, down they go to the bottom, almost like shot.

From these two simple experiments the conclusion is inevitable that Mr. Dadant is mistaken when he says the paper sinks through the melted wax in his molds, only because it is made heavier by being soaked with water.

We shall next test the accuracy of Mr. Dadant's observations, regarding the wax being replaced by water during the process of boiling.

In a vessel containing clean boiling water I place a piece of paper which has been dipped in wax, in order, if possible, to free it of wax, and to saturate it with water instead. I have at hand a hot smoothing iron and a piece of writing paper, so as to find if, after the boiling process, there is even a trace of the wax remaining in the paper; but the smoothing iron and writing paper are unnecessary, because, after boiling the waxed paper for a longer time than it is ever boiled in Mr. Dadant's tank, I find that it is still stiff and semi-transparent with wax. I repeat the boiling, this time forcing the paper below the surface of the water, and the result is the same. I place the waxed paper between folds of the writing paper and apply the hot iron, and I find I have great blotches of wax.

Since the wax is not replaced by water, when the paper is boiled in water without wax, it is much less likely to be so replaced, when boiled in Mr. Dadant's tank, containing a small quantity of water, and a large quantity of melted wax.

It must now be clear to the reader that in Mr. Dadant's molds all foreign matters, including foul-brood spores, remain like the paper, encased in wax. If they sink it is because they are specifically heavier than wax, and not because they become soaked with water, as alleged by Mr. Dadant.

When I first took up this subject I coated some garden seeds with melted wax, and I exposed others from the same paper, which were not coated, to the same temperature. The latter sprouted when placed in wet flannel in a warm room, but the former, treated similarly, showed no signs of sprouting, because they could not absorb water. They remained dry in their coating of wax, although wrapped in wet flannel. It is just so with the spores of foul-brood in Mr. Dadant's tank; they remain dry in their coating of wax, and, as previously shown, require probably a temperature of 284° for three hours, to destroy their vitality, or a still longer time at a lower temperature.

The foregoing are very simple experiments. Let the reader repeat them for himself, and he will be convinced that Mr. Dadant has not been as accurate in observing facts as he should have been.

But I may be asked this question: If, as you say, spores encased in wax are dry, and cannot germinate, because they cannot imbibe water, is this not exactly their condition when in a sheet of comb-foundation ? I answer: Yes, this is quite true; so long as the spores are imbedded in the wax, they are harmless. This answers all Mr. Dadant's remarks about the immunity of his bees while inspecting his cakes of wax, and while nuzzling among the skimmings from his tank; and it answers all that has been written about the universal spread of foul-brood, if it is true that foundation may contain live spores.

But, while voluntarily making this admission, I wish to say that I think it reasonable to believe that, when bees are drawing out foundation, or during some of the numerous changes of form which wax undergoes in the hive, spores may occasionally become stripped of their coating of wax, and, being expossd to moisture, perhaps in the saliva of the bees, or in the food of the larvæ, may start the disease. The probability of this taking place is so great that bee-keepers would hardly venture to use foundation knowing it to contain fertile spores.

There is probably nothing more to be added to our present knowledge of the subject by further argument. What we now require is experiment to determine the death point of spores of foul-brood in melted wax. When this is known we shall probably require to know the length of time a temperature of say 180° must be applied to have the same effect as the temperature causing sterilization. If these facts were known I am sure the manufacturers would willingly make the necessary changes in their processes to meet the new requirements.

To have the confidence of all concerned, such experiments should be made by Dr. Sternberg, or some one equally competent. This will cost money, which at present is not in sight.

The interests of manufacturers of foundation, and the interests of bee-keepers who use it, run parallel in this matter. If foul-brood is more prevalent now than it was fifteen years ago, which is the opinion held by many, and if this increase is attributable to the almost universal use of comb-foundation of late years, which I believe is the case, it is only a question of time till bee-keeping will become unprofitable, and foundation will not be in demand. We are all in the same boat, and we should all be equally desirous to know the whole truth.

Lindsay, Ont., Nov. 17, 1891.

[We have given the foregoing article exactly as it was written, in order to try to satisfy our correspondent.

In reference to the error made in our remarks on page 804, we would say that we made a correction on page 39, but it seems that we did not quite cover the whole ground. The second and third lines of paragraph 6, of the foregoing article (page 713) should read thus: "The wax is heated to 212°, and kept liquid for at least 24 hours." By an oversight in quoting from Mr. Dadant, the sentence was incorrect. But this does not at all interfere with the argument, which it seems to us is unanswerable, and it matters not whether it is made by a scientist or not. It may be true that we "rush in where angels fear to tread," but the argument is just as strong as if made by a scientist. That it may not be lost sight of, we give it again in its entirety, as corrected above, Here it is:

On page 448, Mr. Corneil approvingly quoted this remark: "An exposure of 1½ hours to a temperature of 212° appeared to be equivalent to an exposure of 15 minutes at 228°"—just one-sixth of the time. The difference between 212° and 257°, the point at which spores are surely killed, is 45°. If that 1½ hours are reduced to one-sixth of that time by the increase of 15° in temperature, then 1½ hours at 212° equals 5 minutes at 257°. And Mr. Corneil affirms that "it has been ascertained that a long exposure to a lower temperature produced the same effect as an exposure to a higher temperature for a shorter time."

Dr. Sternberg shows that the death point in micro-organisms was from 122° to 212°, and that 5 out of 37 of the strongest of them required 4 minutes of moist heat to cause death, and one of that five was bacillus alvei (foul-brood microbes).

Now, instead of merely subjecting these microbəs for 4 minutes to 212° in making comb-foundation, the wax is heated to 212° Fahr., and kept liquid for at least 24 hours, as shown by Mr. Dadant's statement on page 470. Surely, this is more than sufficient to take the life out of even the strongest microbes; as they are for many times the length of the time exposed to the temperature required to kill "one of the most resistant pathogenic germs known."

There is not, therefore, the slightest excuse for further agitation of the question, or for the suspicion that the use of comb-foundation, when properly made, can possibly aid in spreading the disease.—Ed.]

Colorado State Convention.

H. KNIGHT.

The semi-annual meeting of the Colorado State Bee-Keepers' Association was held in Arvada on Oct. 22.

President Millison called the meeting to order at 10 o'clock.

The minutes of last meeting were read and approved.

The idea of holding a "honey day" each year in some town outside of Denver, was advanced by Mr. Rhodes, and met with favor from all the members present.

Mr. Honnett said that Golden was the most appropriate place for the first "honey day." President Millison also favored Golden. Mr. Higgins stated that Golden would offer inducements in the way of premiums on exhibits, low railroad and hotel rates, etc.

A committee of five was appointed to arrange for a Honey Day, as follows: B. Honnett, R. H. Rhodes, D. Devinney, Thos. Crisman and G. W. Dollison.

B. Honnett asked to have "The Proper Time to Put on Sections" discussed.

Mr. Ranchfuss said, when the colonies are strong, and just before the honey begins to flow. The exact time cannot be fixed, for the season varies.

Mr. Carlzen, of Montclair, puts on the sections early, as an inducement for the bees to go up into the supers to work, and thus prevented swarming to a certain extent.

Mr. Ranchfuss, of Harman, had practiced putting drone-brood into two or three surplus sections, and said that it will get the bees to work every time. He also adds that bees must have proper ventilation.

The President said that all necessary supplies should be on hand when the season opened, so as not to lose the best part of the honey-flow.

Mr. Ranchfuss reported 100 pounds of honey per colony, although the season was short, and a hail storm destroyed many of the flowers. Nearly all of his honey was from cleome.

Mr. Porter, of Arvada, gave his experience with natural swarming and dividing, and prefers the latter.

Mr. Porter, an expert from Longmont, posed as an A, B, C scholar, and asked for information, which he got.

Mr. Miller, of Longmont, arose and addressed the convention with much eloquence and sweetness.

Mrs. McDaniel, of Denver, called for Mr. Adams, the inspector of Boulder County.

Mr. Adams came forward and talked about bees and honey in his county. He reports foul-brood there.

The President adjourned the meeting until we returned from Rhodes' ranch, to which all were invited to partake of chickens raised by Mrs. R.

The afternoon session was opened with a song by the Rhodes sisters.

Mr. Rhodes was called upon to read the foul-brood law, which he did. When Mr. Honnett asked how the inspectors were to disinfect themselves, Mr. Rhodes explained that carbolic acid, reduced, was the best disinfectant.

Then followed a general talk on the contagious diseases of bees.

Mr. E. B. Porter thought that the inspector should be compelled by law to visit each apiary in his county at least once a year.

Mrs. McDaniel asks how to disinfect hives. Mr. Ranchfuss burns gasoline in them, others boil, or scald and scrape them.

Mrs. Boyd asks why the yellow jackets destroy the bees. Mr. Adams and President Millison said that only weak colonies are destroyed thus.

The Secretary gave an account of Mr. Collins losing 35 colonies by jackets.

Mr. Ranchfuss had noticed that the "bee-killer" had been very numerous during the past season, and many bees were destroyed while in the fields, which left colonies in a weak condition, to be finished by yellow jackets.

Mr. Porter asked how near the hives should be together.

Mr. Ranchfuss said that it depends on circumstances. If all the queens are laying when given to the colonies, they can be very close, but if young queens are to mate from the hives, they should be further apart. He recommended painting the entrances different colors.

Mr. Carlzen wants to know how to get a good price for our honey crop.

Mr. Honnett's opinion is that we cannot regulate prices.

Mr. Carlzen also said that a poor grade of California honey is being sold in the Denver market for Colorado honey.

Mrs. Boyd asks why most of the honey this season is dark colored, which the Secretary said was caused by so many yellow flowers.

Mr. Devinney had an idea that it was gathered from sweet clover.

Mr. Ranchfuss and President Millison both said that sweet clover yields white honey. Mr. R. said that their bees got yellow honey in the first of the season, and white the latter part, which is an exception to the general rule.

The question-box was opened, but only three questions were found.

No. 1. What will be the result of putting two or more swarms into one hive? Answered by Ranchfuss, that the bees will destroy all queens but one. Possibly kill them all, and leave the colony queenless. To unite colonies, sprinkle them with flour, while they are getting the flour off, they will become acquainted.

No. 2. Why do bees have surplus comb uncapped, though filled with honey, during a honey-flow? Mrs. Hartman answered that the weather was not warm enough to make wax.

Mr. Ranchfuss added that the weather turned suddenly cold which caused the bees to desert the outside sections.

No. 3. Has any one had experience in the cellar wintering of bees in Colorado? Mr. Devinney said that he had, but would not recommend it here.

A committee was appointed on co-operation, looking forward to the controlling of the prices on honey in the northern counties of the State. Chas. Adams, of Greeley; G. C. Miller, of Longmont; J. A. Ferguson, of Loveland; B. Honnett, of Arvada; H. Knight, of Littleton, were appointed as the committee, when the President was added as chairman, and H. Knight made Secretary.

The Rev. Mr. Stone then made a few very appropriate and pleasing remarks which were followed by Mr. Honnett on "The Benefits of this Meeting," in which he struck the key-note, by saying that it had done us all much good to meet together.

Mr. Honnett then introduced a resolution, thanking Mr. and Mrs. Rhodes for the entertainment, which was seconded by every one present.

The President, in a short speech, closed the meeting.

Littleton, Colo. H. Knight, *Sec.*

Apiarian Exhibits at a California Fair.

The entries for premiums were few, and the display of bees and honey rather below what it has been in years past.

C. F. Jost, of Banning, who owns and handles 200 colonies of bees, exhibited 48 pounds of comb-honey, the very best in sight, but made no entry for a premium.

W. W. Bliss, of Duarte, had four small sheets of comb-foundation entered, competing for a diploma, which the judges awarded to him.

J. Archer, of Ventura County, exhibited his new hive. He says it gave 830 pounds of extracted-honey and 60 pounds of comb-honey in one year. He had about 30 pounds of honey and 50 pounds of extracted-honey on the competitive list, and took the blue ribbon, and scores A1 for both bees and honey.

Mr. Archer is very confident that his hive is superior to any other, and offers to compete with any one in the production of both comb and extracted-honey, or either article. He will use his hive and no foundation whatever, the competitor to use any but Mr. Archer's hive, and be compelled to use foundation.

Mr. Archer will put up 150 colonies of bees as a forfeit if he does not produce one-third more honey in one season than any other party, either of comb or extracted, in any good year in the locality of Ventura County, the competitive hives of bees to be put in the same range and have equal chances, two judges to be selected, one by Archer and one by competitors, the judges to select one colony of bees from Mr. Archer's apiary and one from the competitor's apiary, and the judges to determine at the end of the season as to the quantity of honey produced, and in case they cannot agree then they are to select a third party, as additional judge, to determine the contest.

Mr. Archer will meet competitors half way from the respective apiaries, the judges to select the locality for the contest, and the bees all to be kept in one hive for each one of the contestants. And further, the contestant to put up as a forfeit in case he gets less honey from his one hive than J. Archer does from his one hive, either 150 colonies of bees or their value in money.

Mr. Metcalf, of Santa Paula, had on exhibition a newly patented honey extractor that deserves the attention of producers of extracted-honey. We think it is as near perfection as any machine we have seen, and its capacity to do a large amount of work in a short time is a fixed fact. The comb baskets are reversible, and the gearing so adjusted that it works smoothly and lightly. It carries either four or six comb baskets as desired, and the cost is within reach of any one owning and handling 40 colonies of bees.

C. N. Wilson entered 170 pounds of extracted, and 120 pounds of comb-honey, and carried off the red ribbon.

It is not to the credit of the bee-keepers of the district that so little interest is shown in exhibits at this annual fair. While it is true that the premiums offered are small, they are in proportion to premiums offered in other divisions, and it is probable that more would be offered if greater interest was taken by bee-keepers in the success of the Sixth District Agricultural Association. —*Rural Californian.*

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Bee-Keeping in Wisconsin.

A. E. BRADFORD.

This has been a poor year for honey in this locality. It was a very cold, backward Spring, and we had a frost that killed all the bloom on the trees, such as box-elder, maple, willow and poplar—that is all the kind of timber we have that bees work on to amount to anything, for it is a prairie country, and all the trees we have are those that we have set out.

I think this is a good locality for honey, but I was told by some old bee-keeper that if I had my bees in the woods some eight or ten miles from here they would do much better, so I moved part of my bees eight miles, to where there was basswood in abundance.

I took care of them myself, going in every morning. They swarmed more than I wanted them to, but all small swarms I doubled, so that I have all strong colonies, but I have got very little honey—about 35 pounds per colony, Spring count.

Now, when a man tells me to take my bees into the woods, I ask him what his honey crop has averaged per colony for the last three years, and if he knows and will tell the truth, I find that my bees do the best, if it is a prairie country.

I reared queens for my own use on the Doolittle plan, and I must say that it pays to rear queens, if only for the fun there is in it.

I have a hive that suits me better than anything I have seen, and I will give the dimensions of it: Inside, 11½x13⅛ inches; depth of back end, 11½ inches; front, 14½ inches. It will hold 18 4¼x4¼x1⅞ sections. I have tried this hive, and have found it good for surplus, and also for Wintering, for it is always clean on the bottom, and I have found that if the bottoms of the hives are clean all the time, there is but little danger in Wintering.

Hammond, Wis.

◆

Northwestern Bee-Keepers' Convention.

W. Z. HUTCHINSON.

The bee-keepers of the Northwest held their annual meeting at the Commercial Hotel, in Chicago, on Nov. 19 and 20.

The convention was called to order at 9:45 a.m., with President Miller in the chair. The exercises were commenced with a prayer by A. I. Root.

Honey Quotations and Grading.

Thos. G. Newman—Commission men are buying honey much more than in the past. They are buying, instead of selling on commission.

A. N. Draper—This may be the result of a small crop. When there is a small crop they buy; when the crop is large, they sell on commission.

President Miller—Why does not comb-honey sell for more than 16 cents, when there is such a scarcity?

E. T. Abbott—Many commission men in St. Louis do not distinguish between poor and good honey.

President Miller—I often get higher prices for honey than those given in the quotations. Others have reported similarly. This is an injury to us. Men see the quotations, and sell at home at low figures. What can we do about it?

Thomas G. Newman—We send out postal cards all ready to fill out to dealers, and try to give fresh reports.

A. I. Root—This is substantially what we do.

W. Z. Hutchinson—It looks, on the face of it, as though commission men reported honey too low. I know a man who sent honey to a commission man in Chicago. This dealer was quoting honey at 15 cents, yet the honey was soon sold at 18 cents.

Geo. E. Hilton—The honey in Northern Michigan is of excellent quality this year. It is from the great willow herb. There are thousands of acres of this plant 25 miles north of me. I think we confer a benefit on producers when we go about among them and buy their honey at a shilling a pound.

B. Taylor—I want to put myself in opposition to any attempt at "cornering" honey. There is never any "corner" on any product until it has passed out of the hands of the producers. I sell my own honey. Not near home, however. I load a car and push out West. In Minnesota the quotations are not above the prices paid.

E. T. Abbott—Suppose we ask dealers to say how much they will *pay* for honey?

A. N. Draper—Honey is often quoted too *low*. The market reports are made up of quotations upon different articles. I think the honey quotations are taken from the price-current sheets.

President Miller—They do not do this.

G. K. Hubbard—Why not ask dealers to say for how much they have actually *sold* honey?

Thomas G. Newman—They will not do this. They say: "We *quote* honey so and so," but they do not give reports of sales.

President Miller—I do not say it to boast, but I suppose I once raised the price of honey 2 cents a pound in Chicago. I went around to the papers and showed them I had made *actual sales* at 2 cents above the quoted prices, and the papers put up their quotations.

M. H. Mandelbaum (with S. T. Fish & Co.)—I will fill out any blanks that the bee-periodicals will furnish.

A. B. Mason—I see no objections to dealers saying for how much their honey is sold.

E. T. Abbott—I do not care to tell at what figures I *sell* honey. I am willing to tell what I *pay*, but it is nobody's business what I sell it for.

President Miller—We are mixing things. I think Brother Abbott is willing to tell what he *pays* for his honey.

E. T. Abbott—Certainly.

President Miller—If a man is selling on commission, it is also proper that he should tell at what price he sells. If he buys and sells, it is, as Brother Abbott says, nobody's business at what price he sells. In connection with this matter, there is the question of grading honey. How should the different grades be distinguished?

Thomas G. Newman—Many of the troubles we have been discussing arise from the lack of a standard in grading honey.

A. I. Root—We have no end to troubles and losses because the honey sent us as first-grade honey is not what we call first grade.

On motion of A. B. Mason a committee of seven was appointed to draft a standard of grading for honey. The committee appointed was as follows: A. B. Mason, M. H. Mandelbaum, George E. Hilton, Byron Walker, M. M. Baldridge, Mrs. L. Harrison and W. Z. Hutchinson.

Paying Dues.

A recess was now taken, when the following members paid their dues:

Thomas G. Newman, Chicago, Ills.
C. C. Miller, Marengo, Ills.
J. S. Seeley, Oswego, Ills.
M. M. Baldridge, St. Charles, Ills.
E. T. Abbott, St. Joseph, Mo.
E. Whittlesy, Pecatonica, Ills.
J. M. Hambaugh, Spring, Ills.
Geo. E. Hilton, Fremont, Mich.
A. I. Root, Medina, Ohio.
I. Schirer, Petona, Ills.
A. N. Draper, Upper Alton, Ills.
M. H. Mandelbaum, Chicago, Ills.
B. Taylor, Forestville, Minn.
Frank Seeley, Yorkville, Ills.
W. C. Lyman, Downer's Grove, Ills.
Byron Walker, Capac, Mich.
W. A. Vance, Glencoe, Ills.
O. O. Poppleton, Hawk's Park, Fla.
G. K. Hubbard, Ft. Wayne, Ind.
J. C. Wheeler, Plano, Ills.
W. Z. Hutchinson, Flint, Mich.
Jno. Rehorst, New Hampton, Iowa.
W. P. Fulmer, Wheaton, Ills.
N. Staininger, Tipton, Iowa.
A. B. Mason, Auburndale, Ohio.
J. H. Larrabee, Agricultural College, Mich.
Frank Blecka, Elgin, Ills.
E. S. Hubbard, Oil City, Iowa.
A. Y. Baldwin, DeKalb, Ills.
C. P. Dadant, Hamilton, Ills.
N. L. Stow, South Evanston, Ills.
G. W. Redmond, Paris, Ills.
R. R. Murphy, Garden Plains, Ills.
J. A. Green, Dayton, Ills.
R. A. Burnett, Chicago, Ills.
E. W. Farrar, Downer's Grove, Ills.
J. Forncrook, Watertown, Wis.

LADY MEMBERS.

Mrs. L. Harrison, Peoria, Ills.
Mrs. G. K. Hubbard, Ft. Wayne, Ind.
Mrs. N. L. Stow, South Evanston, Ills.
Miss Emma Wilson, Marengo, Ills.
Miss Zetta Strong, Ottawa, Ills.

Apiarian Experiments at Lansing.

When the meeting was again called to order, President Miller said that the Secretary had informed him of the presence of Mr. J. H. Larrabee, who has charge of the apiarian experiments at the Agricultural College of Michigan, and he (the Secretary) had suggested that perhaps Mr. Larrabee would like to have bee-keepers tell him what experiments they would like to have him try. For one thing, the President would like to learn what Mr. L. had already done.

J. H. Larrabee—We have made some experiments to determine how many pounds of honey are consumed in secreting 1 pound of wax. We have also decided not to experiment further in planting for honey.

J. A. Green—Why have you so decided ?

J. H. Larrabee—It takes too many acres of plants to do any good. We had eight acres of rape near the apiary, but it seemed to furnish no honey.

O. O. Poppleton—Practical bee-keepers decided long ago that it did not pay to plant for honey alone. But an experiment of even eight acres of rape for one year is not conclusive. Some years the fields are white with the bloom of clover, yet no honey is secured.

President Miller—I think it would be well if the results of these experiments could be given monthly. Many who read them might thereby get helpful hints, or might be able to help the experimentor in a similar manner. Perhaps the Secretary of Agriculture might not like to have Mr. Larrabee "give away" this matter in advance of his report to the Government, but I presume the Secretary does but little reading of the bee-periodicals, and probably would know nothing of the matter.

J. H. Larrabee—It is Dr. C. V. Riley to whom I report. I presume he reads bee-literature more or less. It is quite likely he would not object to my giving in advance to the bee-periodicals the results of my experiments. It would certainly do no harm to ask him.

Upon motion of J. A. Green the Secretary was instructed to write to Dr. Riley and ask permission for Mr. Larrabee to publish in advance, in the bee-periodicals, the results of experiments when he thought best to do so.

Contraction of the Brood-Nest in Wintering.

In reply to a question, C. P. Dadant said he did not contract unless the combs were empty, or the colony weak. His hives contain 9 Quinby frames. If the bees occupied 7 combs, he would not remove any.

A. I. Root—I do not advocate 8-frame hives, but you know the boys do. They say that taking off the upper story contracts sufficiently for Winter.

President Miller—I have about concluded that the man who uses 8-frame hives must feed the bees in the Fall or Spring—perhaps both.

A. I. Root—Would it not pay better to contract and get the honey in the sections where we can sell it for 18 cents, and then feed up on granulated sugar ?

C. P. Dadant—We have found it to pay better to leave in plenty of honey, as the bees breed up better in the Spring.

President Miller—Is a comb full of honey, that will not be used in the Winter or Spring, of any advantage.

O. O. Poppleton—Yes ; it gives the bees confidence to go ahead and use what honey they need.

B. Taylor—I am willing to go to the trouble of taking out any extra comb in the Fall, and returning it in the Spring. A comb not covered with bees can be kept much better out of the hive. The more completely the combs are covered with bees the better, provided there is sufficient stores. It is surprising to see into how small a space bees can be crowded in the Fall.

Verbal Statistics.

President Miller said that after reaching home, and reading over the report of a meeting we often find that some man was there whom we were particularly anxious to meet, but we did not know he was there. If, by means of a badge, or in some other manner, we learn that a stranger whom we meet is a bee-keeper, we immediately wish to know, and probably ask his name, then his place of residence, next how many colonies he has, then how much honey he secured this year. That is about the way it goes.

He proposed that each one stand up in turn and tell his name, residence, number of colonies, and yield per colony. This was done, and proved quite interesting, as well as amusing in some instances. If this could be done sometime during the first day, it would help some in making acquaintances.

Prevention of Swarming.

A. I. Root said: Get a race of bees that will not swarm ; the same as we now have non-sitting strains of poultry.

President Miller—Is not the thing possible ?

O. O. Poppleton—I have several times tried buying queens that were cracked up for this or that—among other things that of non-swarming—but I have quit it. It is no go.

J. A. Green—Bees may not swarm for a year or two ; then they go at it again.

C. P. Dadant—For 15 years we have had very few swarms. We give plenty of empty comb in which to store the honey. If we wait until the bees have the swarming fever before giving the room, it will not prevent swarming. Excluding the queen from a portion of the hive also has a tendency to cause swarming.

J. A. Green—I did not have a swarm from 60 colonies where queen-excluders were used.

W. Z. Hutchinson—For three years I have sold my tested queens in the Spring, replacing them with young queens from the South. When the young queens were introduced before the swarming fever set in, no swarming followed. In only one instance did a swarm issue, and then the queen was imperfect in some respect. She laid only a few eggs, and the bees seemed dissatisfied.

C. P. Dadant—The presence of drones has a great influence on swarming. One reason why bees with a young queen are less likely to swarm is that a young queen does not lay so many drone eggs.

J. A. Green—I think something might be done with traps in the way of getting drones out of the hive.

C. P. Dadant—It is better not to rear them.

B. Taylor—I am inclined to agree with Brother Dadant that drones have a great influence on swarming. I also got some hints from his idea on keeping a swarm awhile before returning it to its hive.

Do Bees Injure Crops by Taking Away Honey?

A. I. Root—I believe Prof. Cook has answered this question in the papers by saying that they do not.

B. Taylor—Bees are needed to fertilize blossoms, and Nature commits no fraud.

President Miller—We are inclined to decide as we *wish* it to be. If we say that honey is evaporated if the bees do not gather it, it is nonsense. I saw honey, last Winter, in blossoms that had faded in my room.

J. H. Larrabee—If the nectar is found dried down, it is proof that the plant does not appropriate it.

President Miller—Perhaps the honey left in the blossom is a benefit to the stock that eats the hay. There is no doubt that the gathering of the nectar is a benefit, on the whole, but let us not say that the carrying away of the nectar is no injury to the plant.

C. P. Dadant—The blossoms yield honey and an essential oil. The latter gives the perfume. The oil and water may be evaporated, but the saccharine portion of honey cannot be evaported, as we all know.

Bees Injuring Grapes.

A. I. Root—In California bees destroy grapes while they are being dried into raisins. This has become so serious a matter that in many places the bees are moved to some other locality.

A. B. Mason—One grape-grower near Cleveland told me that the absence of bees caused him a loss of $500 in one season. Whenever a grape cracks it soon spoils. The bees suck the juices from the cracked fruit, and save the labor of removing the injured fruit.

C. P. Dadant—Bees cannot *bite*. They can take hold of any fiber, in a fibrous material, and pull it out. They cannot *bite* the smooth surface of a grape any more than a man can bite a piece out of a plastered wall.

President Miller—Last year, when there was nothing for the bees to gather they did not eat the grapes. If they could, why did they not do it?

Concluded next week.

Bee-Keeping in Central Missouri.

CALEB L. BUCKMASTER.

The Fall harvest from Spanish-needle has been very good, and if the extractor is not used the bees will have enough stores from this source to Winter well.

There has never been as large a crop of honey-dew as that gathered last Spring, and all bee-keepers unite in saying that it is the blackest they have ever seen.

There seems to be a great deal said of honey-dew. I not believe the reports of our scientific men on the honey-dew, but I am firm in the opinion that when thoroughly investigated it will prove to be of vegetable origin, and not the products of insects.

I am sure of one thing, and that is, that to have furnished the amount of honey-dew produced in Boone County, Mo., this year would have required a multitude of insects sufficient not only to have filled the trees, but the whole atmosphere.

When attending the lectures of Dr. J. G. Norwood, of the University of Missouri, some years ago, the subject of honey-dew was lectured upon, and the conclusion reached that the scientific world, after laborious research, had decided that there was no solution to the question. Since that time I have heard many theories advanced, including the one advanced by Prof. A. J. Cook.

Now, the professors at the head of agricultural and scientific colleges are called upon to account for a certain phenomenon; they investigate, and think they have found the real cause, and honestly give the results of their investigations, not using any positive terms. As there is no one to dispute this opinion, the common people take this as a positive scientific result, when the professor never intended it for such.

When this insect theory was first advanced, I thought it a good one; but when I stood under trees whose leaves were dripping with sweetness, and could not see an insect to produce it, I became skeptical. I can believe that men have seen our honey-bee gathering the excrement of some insects, but I do deny that these minute insects are the origin of our immense honey-dew crops. I claim that when rightly investigated it will prove to be of vegetable origin.

Now, for another queen-excluder: Take the broad frame containing the sections 4¼x4¼x1¾, and turn it upside down. Tack a strip of perforated zinc from one end to the other over the holes that the bees pass through, leaving one-half of the zinc projecting to cover the holes in the next broad frame. When the sections are put in, and the frames wedged in the super, you have a perfect queen-excluder, with half the expense of those in the market, and we have only one bee-space instead of two under the super, causing the bees to enter sooner.

Columbia, Mo.

Keeping Bees in an Attic.

A. C. SANFORD.

While many a family would like to keep a few bees to produce honey, but very few know how to manage them properly. The result generally is that they are not attended to, the swarms fly away; and the bees swarm when the farmer is haying, and his wife, or some of the hired help, or neighbors, are left to attend them. All know, also, that bees have stings.

That is not always very agreeable; but I have a plan by which almost any family may keep a colony or two of bees with very little trouble, and have plenty of honey. Here it is:

Make a small, dark, frost-proof room about 4x6 feet, as may suit your own convenience best, in the upper part or attic of your house. Erect a scaffold inside this room 4 feet high, and within 6 inches of the side, where you wish the entrances, which should be about 6 inches wide by ½ inch high. This may be enlarged or contracted to suit the season of the year.

These entrances should be on that side of the house which is used the least, for bees sometimes get too familiar. Now put the hives on the scaffold, about 6 inches from the entrance. Make a little board for them to travel out and in on.

A hive should contain about 2,000 cubic inches, and have holes in the bottom. It is said that bees will seldom swarm from such a place, and will Winter well there, even in as cold a climate as Wisconsin.

Of course further north the room must be warmer. Bees will build comb under their hives in large quantities, in favorable seasons, in such a room, and the owners, when they want honey, may go with a light placed at one side, smoke the bees, and cut off what honey they want.

This plan is not a mere "castle in the air," but is a practical one. I am an experienced apiarist, have been in the business many years, and have produced tons of honey.

Ono, Wis.

Introducing Virgin Queens.

JOHN HEWITT.

In the notice of the Punic queens I sent you, Mr. Editor, on page 167, for Aug. 5, you omitted to say they came by post, and were *virgins*.

It is pretty well believed by every bee-keeper in America that old virgin queens cannot be safely sent a distance, and introduced in an easy and simple manner to strange bees. Even G. M. Doolittle says, in *Gleanings* for July 15, 1891, page 583: "I consider the introduction of virgin queens as impractical." And A. I. Root says at the foot of his letter: "We have several times given our opinion that it did not pay to buy or sell infertile queens. If one could be sure of getting them the day they were hatched, either in the hive or some kind of nursery, they might prove valuable; but when it comes to trying to introduce those that are several days old, our experience is exactly with you."

Now, all bee-keepers know that queens do not mate until several days old, yet Mr. Root admits they "might prove valuable" if they could be had just hatched, and if *valuable* at one day old, how much more so would they be at from

6 to 12 days old, when ready to mate? It has always appeared to me to be a stupid practice when one finds a colony queenless, or one he desires to divide, to send for a fertile queen when a virgin would do just as well, for we have on one hand a waiting, queenless colony and drones, and on the other a queen in a nuclei, with perhaps less chance to mate her.

For three years I have been selling virgin queens in England, safe delivery and introduction guaranteed, and I must say G. M. Doolittle and A. I. Root have been rather slow not to have known of this fact, particularly as it was published in the *Canadian Bee Journal*, with all the instructions for introducing the queens, which G. M. Doolittle could not have read with any attention, or he would not have asked Brother Jones to "tell us in detail just how he does it." See *Gleanings* for July 15, page 585.

The way I do it is as follows: If the party is a new hand, and does not know my system, I send him, three days in advance of queens, notice that they will be sent in three days, and instructions how to introduce them. Up to this year I sent two days' notice, and queens four days and upwards old, but finding four days old too young, and two days' notice too little for most, I now give three days' notice, and send queens six days old. When my system is *understood*, parties can have them on receipt of their orders.

No queen is now started off until she is six days old, which was the age of those I sent you, Mr. Editor, and after traveling from here to you, and safely introduced in accordance with my printed instructions, shall Messrs. Doolittle and Root, or any one else, say that such queens cannot be safely sent a *distance*, and introduced to other bees?

My experience this year indicates that my instructions are about infallible. Certainly I have not for three years had a verified report of failure. When there has been a failure, a queen, eggs, or brood, has been found, and when removed a virgin was subsequently introduced safely. People have failed and then have written to me asking what to do, after saying what they had done. Some have been indignant when I told them to "remove the other queen from the bees first." This year, with more perfect instructions, pointing out where failures may occur, I have only had one case of reported failure—two queens sent to one party, both of which were lost. Other queens were subsequently found in the hive.

Mr. Doolittle says, in *Gleanings*, as quoted above, "bees will often kill a virgin if only combs having no brood are placed in the hive within forty-eight hours after the bees have liberated her." Surely he cannot have tested the matter much, or he would never have made *this statement*.

To be successful in sending virgins a distance, they should be six days old, certainly not less than four days, and they must be packed and sent exactly as fertile queens, with a number of worker-bees to keep them company. There is no limit of age above this, only it should be remembered that if a queen does not mate before she is twenty days old, the chances are that she will be a drone-breeder, hence, it is the proper thing when selling these queens to guarantee the mating. Then, if they are too old to mate, the loss falls on the seller.

I consider that there are great possibilities in supplying virgin queens properly bred, as breeders can give their attention to rearing them, and make it not worth a bee-keeper's while to rear his own, particularly when well-bred virgin queens sent out can be guaranteed to produce bees that will not suffer from Winter diarrhea.

I see by the *Canadian Bee Journal* for August 1, page 606, Mr. Jones replies to Mr. Doolittle's article in *Gleanings*, saying that the queens were introduced at dusk, but he does not give me the credit of first pointing out that the secret of success in introducing virgin queens lay in *giving them when it was* DARK, but credits it to one of his foremen or pupils. Certainly it was not mentioned by Mr. Jones or any one else until after my "Instructions for introducing virgin queens" had been printed in his journal.

Sheffield, England.

North American Bee-Keepers' Association.

Programme of the Convention to be held in Agricultural Hall, Albany, N.Y., Dec. 8 to 11. December 8 will be an informal meeting.

FIRST DAY.

Wednesday, Dec. 9, 9 a.m. President's Address.—P. H. Elwood, Starkville, N. Y.

Appointment of committees, and routine business.

10:30 a.m. Some of the Newer Races of Bees—Frank Benton, Washington, D. C. Discussion. Question-box.

2 p.m. The Prevention of Swarming. —W. F. Clarke, Guelph, Ontario, Can-

ada. Discussion: The prevention and control of swarming.

3:30 p.m. The Italian Bee. What are the principal points of excellence, and to which qualities should we give the preference, with a scale of markings as for neat stock?—Geo. H. Knickerbocker, Pine Plains, N. Y. Discussion. Question-box.

7:30 p.m. The Outlook for Apiculture at the Columbian Exposition.—A. B. Mason, Auburndale, O. Discussion.

SECOND DAY.

Thursday, Dec. 10, 9 a.m. Election of officers. Selection of next place of meeting. Business of the association. Volunteer contributions.

10:30 a.m. Discussion: Prices and uses of honey and sugar. Question-box.

2 p.m. Can we Settle upon Two Sizes of Sections as Standard?—C. C. Miller, Marengo, Ills. Discussion: What the Market demands for Packages and Grading. To be participated in by honey merchants and bee-keepers.

3:30 p.m. Discussion: What ought the Department of Agriculture to do in Apiculture? Question-box.

7:30 p.m. The Bees, the Location, and the Apiarist.—G. M. Doolittle, Borodino, N. Y. Discussion: Should Bee-Keeping be Made a Specialty?

THIRD DAY.

Friday, Dec. 11, 9 a.m. Some Facts Not Generally Known About Rendering Beeswax.—R. F. Holtermann, Brantford, Ontario. Discussion: Rendering and Purifying Beeswax, and Making Comb-Foundation Sheets.

10:30 a.m. Reports of Committees, and Unfinished Business. Adjournment.

Reduced Rates on Railroads.

One and one-third regular fare for round trip. The concession is for delegates and others going to Albany to attend the North American Bee-Keepers' Convention, Dec. 8-11, 1891, from the following described trunk-line territory:

By Central Traffic Association from St. Louis and nearly all points in Illinois, Indiana, Ohio, Pennsylvania, as far east as Pittsburg; New York, as far east as Salamanca; and Ontario, Canada, as far north as Toronto.

By the Trunk Line Association, which includes the remainder of New York, Pennsylvania, and New Jersey; and the Southern Passenger Association, which includes all the principal roads in the Southern States.

Bee-keepers from Vermont can obtain reduced rates over the Delaware & Hudson Canal Co. R. R., which can be conveniently taken at Addison Junction or Ticonderoga, N. Y., or at Rutland, Vt.

Instructions to Persons Attending the Meeting.

1. The concession is for delegates and others going to Albany from any of the above described trunk-line territory.

2. If the starting point is located on some small road, or one not in either of the three trunk-line associations making the concession, tickets should be purchased only to the most convenient place where a trunk-line certificate can be obtained, and thence by direct routes only, through to the place of meeting.

3. The going ticket must be purchased within three days before, or not more than three days after, the opening date of the meeting, otherwise no reduction in fare will be made on the return passage.

4. Each person availing himself of the concession will pay full tariff fare going to the meeting, and get a certificate filled in on one side by the agent of whom the ticket is purchased. (The agents keep the certificates in stock.)

5. Present the certificate to the Secretary at the meeting, that the other side may be filled in. Certificates are not transferable.

6. On presentation of the certificate, duly filled in on both sides, within three days (Sunday excepted) after the adjournment of the meeting, the ticket agent at Albany will return the person to his starting point at one-third regular fare. The return ticket will be issued over the route used in going to meeting, and will be available for continuous passage only.

Very Important.

7. It is absolutely necessary for each passenger, before starting, to obtain a certificate from the ticket agent at the point at which the going ticket is purchased, otherwise the passenger will be unable to obtain special rate for return journey, and will be obliged to pay full tariff rates in both directions.

8. Delegates, and others availing themselves of the concession, should present themselves at the office for certificates and tickets at least 30 minutes before the departure of trains.

9. Every person attending the meeting should get a certificate, no matter how short the distance, as, the more certificates are signed at the meeting, the easier it will be to secure reduced rates another year.

For hotel rates, see Convention Notice on page 726 of this issue.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Dec. 8, 11.—North American, at Albany, N. Y.
C. P. Dadant, Sec., Hamilton, Ills.

Dec. 8, 11.—Eastern New York, at Albany.
W. S. Ward, Sec., Fuller's Station, N. Y.

Dec. 8, 9.—Kansas State, at Beloit.
L. Wayman, Sec., Chanute, Kan.

Dec. 15.—Huron, Tuscola and Sanilac, at Sebewaing, Mich.
Jno. G. Kundinger, Sec., Kilmanagh, Mich.

Dec. 16, 17—Illinois State, at Springfield.
Jas. A. Stone, Sec., Bradfordton, Ills.

Dec. 31.—Michigan State, at Grand Rapids.
Geo. E. Hilton, Sec., Fremont, Mich.

1892.
Jan. 6, 7.—California State, at Los Angeles.
C. W. Brodbeck, Sec., Los Angeles, Calif.

Jan. 18, 19.—Colorado State, at Denver.
H. Knight, Sec., Littleton, Colo.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—P. H. Elwood....Starkville, N. Y
SECRETARY—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

Bee and Honey Gossip.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Starved Bees.

I send you a piece of honey-comb, diseased in some way, and would like to have you tell me what is the matter with it. WILLIAM L. UTTER.

Kortright Centre, N. Y., Nov. 12.

[There is nothing the matter with the comb. It contains no honey, and the few dead bees in it are entirely empty, showing that they starved.—ED.]

Honey from Black-Jack Acorns.

My bees averaged 100 pounds of comb-honey to the colony. It was very good honey, and the majority of it came from black-jack acorns. Some insects punctured the acorn, and during the night a sweet substance oozed out, and the bees, in the morning, would come in laden with the honey, and fall down all around the entrances to the hives.

J. D. WHITTENBURG.

Marshfield, Mo.

Bees Prepared for Winter.

My bees are nicely stored away in the cellar, to remain there until next Spring. Most of them, I think, were in prime condition, with plenty of young bees, and enough honey. Seven colonies are much lighter in weight than I expected, and I do not see how I neglected them when I was preparing them for Winter. I shall be obliged to watch them closely towards Spring, or the latter part of the Winter. I have 14 colonies that I shall winter on the summer stands. They are not in chaff hives; but are in a "fix up" hive that I constructed, with two dead-air spaces around, and one on the bottom of the hive. They are nicely packed over the brood-frames with fine excelsior. My impression is, that they are as good for out-door wintering as the chaff hive, the cost is much less, and there is no chaff to get damp and moldy. This out-door wintering is something that I have never practiced before, and it is really an experiment with me. If it proves a success, I will let all know as far as I can.

BENJ. E. RICE.

Boscobel, Wis., Nov. 19, 1891.

Milk-Weed.

My bees are in Winter quarters on the summer stands. They got no surplus honey this season until September; before that they only got a living. I offered them sugar syrup then, but they would not touch it. Then, for about two weeks they flew quite strongly in one direction, but where they got honey from I do not know. There is no buckwheat near Saginaw. In the beginning of October I found that they had the brood-chambers well filled. Last Winter I lost 2 colonies; they gathered mild-week honey, which, I think, was the cause of it. The hives were all stuck up. As my bees did not cast any swarms, and as I wanted a few more colonies, I took two of the strongest that had queen-cells, and divided them. They did well. CHAS. DUCLOS.

Saginaw, Mich.

[It was doubtless *Asclepias purpurascens*, purple milk-weed, which kills bees by its sticky pollen masses.—ED.]

Wavelets of News.

Increase and Honey.

J. F. Hecht, Plainview, Nebraska, bought a colony of bees last Spring, which cost him $10. From that hive he has 6 swarms of bees and 400 pounds of honey. Mr. Hecht has taken great interest in studying the habits of bees, and has learned many curious and interesting things about them. Although the last season has probably been more bountiful than the average, he has demonstrated that with a little care bee-culture may be made quite profitable.—*Plainview Gazette.*

◆

Bees in Winter.

During the Winter months the less bees are disturbed, wherever they are, or in whatever condition they are, the better for them. All that can be done for their protection and safety through the Winter should have been done before.

Some of our bee-keeping neighbors have wondered why I advise removing the entrance blocks during the Winter. I will explain by stating that as there is a high temperature in the cluster, and a low temperature outside of the cluster, it must follow that the moisture arising from the bees will be condensed on the side combs, and if the entrance be left wide open it will assist this vapor to pass out, thus keeping the bees in a dry, healthy condition.

From the above cause it often follows that bees starve to death in the midst of plenty, simply because they have consumed the stores within the cluster, and they cannot move to the side combs because they are as cold as ice and frosty.

There is certainly a great advantage in having the hive crowded with honey; it certainly pays to feed bees in the Fall, even when they seem to have an abundance, for if they do not consume it all they will be prepared to accept the surplus arrangements earlier next season. Strong colonies, in substantial hives, with an abundance of stores, are seldom known to perish in Winter.

Do not be alarmed when you see a few dead bees in front of the hive; they naturally die of old age, and to have them dragged out indicates a healthy colony within.—Walter S. Pouder, in the *Indiana Farmer.*

Convention Notices.

☞ The annual meeting of the Colorado State Bee-Keepers' Association will be held in Denver, Jan. 18 and 19, 1892.
H. Knight, Sec., Littleton, Colo.

☞ The Michigan State Bee-Keepers' Association will meet in Grand Rapids, Mich., on Thursday, Dec. 31, 1891, and Friday, Jan. 1, 1892, Geo. E. Hilton, Sec., Fremont, Mich.

☞ The Illinois State Bee-Keepers' Association will meet in Springfield, Ills., on Wednesday and Thursday, Dec. 16 and 17, 1891.
Jas. A. Stone, Sec., Bradfordton, Ills.

☞ The Kansas State Bee-Keepers' Association will hold their second annual meeting at Beloit, Kan., on Dec. 8 and 9, with the State Horticultural Association. All the bee-keepers of the State are cordially invited to attend.
L. Wayman, Sec., Chanute, Kan.

☞ The Eastern New York Bee-Keepers Association will meet in convention with the North American Association, Dec. 8 to 11, in Agricultural Hall, Albany, N, Y.
W. S. Ward, Sec., Fuller's Station, N. Y.

☞ The Huron, Tuscola and Sanilac Counties Bee-Keepers' Association will meet at Concordia Hall, Sebewaing, Mich., on Dec. 15, 1891. All interested are cordially invited to attend, and help make this one of the best meetings ever held by this association.
Jno. G. Kundinger, Sec., Kilmanagh, Mich.

☞ A special session of the California Bee-Keepers' Association, in honor of the visit of Prof. A. J. Cook and A. I. Root, will be held in Los Angeles, Calif., at the Chamber of Commerce, Jan. 6 and 7, 1892. The California permanent exhibit in an adjoining room, will no doubt be of interest to all.
C. W. Abbott, Prest.
G. W. Brodbeck, Sec.

☞ The North American Bee-Keepers' Association will hold its annual convention in the Agricultural Hall, at Albany, N. Y., from Dec. 8 to 11, 1891. The hotel reduced terms are as follows: Globe Hotel, $2 per day; American Hotel, $2; Cox Brothers, No. 4 William st., $1; W. H. Keeler, 488 Broadway, European plan, rooms 50 cts., 75 cts., and $1; Kimbal House, 69 Washington st., $1; Merchants Hotel, 497 Broadway, $2; I. Keeler, restaurant, 56 State st.; Odel Restaurant, 94 State st. Reduced railroad rates have been secured from Chicago and the Mississippi River and from the South. Every local and State association should send one or more delegates. Those who intend to be present should send their names either to the President or Secretary. The programme will be issued soon, giving all particulars.
P. H. Elwood, Pres., Starkville, N. Y.
C. P. Dadant, Sec., Hamilton, Ills.

The Christmas number of Frank Leslie's Popular *Monthly* contains Joaquin Miller's new story, "The Red Shield." It is a romance drawn from the exciting history of the foundation of the great banking house of the Rothschilds, in the early part of the present century. There is an abundance of seasonable Christmas matter, together with the usual variety of tales, poems and miscellany.

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BEE JOURNAL

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Transient Advertisements must be paid for IN ADVANCE.

DISCOUNTS:

On **10** lines, or more, 4 times, 10%; 8 times, 15%; 13 times, 20%; 26 times, 30%; 52 times, 40%.
On **20** lines, or more, 4 times, 15%; 8 times, 20%; 13 times, 25%; 26 times, 40%; 52 times, 50%.
On **30** lines, or more, 4 times, 20%; 8 times, 25%; 13 times, 30%; 26 times, 50%; 52 times, 60%.
On larger Advertisements, discounts will be stated, upon application.

Advertisements intended for next week must reach this office by Saturday of this week.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

All New subscribers for 1892 will receive the remaining numbers of this year *free.*

◆

To Annual Advertisers.—On all contracts made for the year 1892, we will insert the advertisement as soon as received, and no charge will be made for the insertions this year. The matter may be changed at any time, without cost to the advertiser. "The early bird catches the worm." Write for our terms, and the sooner the contract is made the more free insertions will be given.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The 7 above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
Quinby's New Bee-Keeping	2 50	2 25
Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
History of National Society	1 50	1 25
American Poultry Journal	2 25	1 50
The Lever (Temperance)	2 00	1 75
Orange Judd Farmer	2 00	1 75
Farm, Field and Stockman	2 00	1 75
Prairie Farmer	2 00	1 75
Illustrated Home Journal	1 50	1 35
American Garden	2 50	2 00
Rural New Yorker	2 50	2 00
Nebraska Bee-Keeper	1 50	1 35

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

◆

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

◆

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

◆

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

HONEY AND BEESWAX MARKET.

NEW YORK, Nov. 27.—Demand is limited, and supply sufficient. We quote: Comb—Fancy white, 1-lb., 14@15c; 2-lb., 12c; off grades, 1-lb., 12@13c; 2-lb., 10@11c; buckwheat, 1-lb., 10@11c; 2-lb., 9c. Extracted—Basswood, white clover and California, 6¾@7c; orange bloom, 7@7½c; Southern, 65@70c ⅌ gal. Beeswax, 26@27c.

HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, Nov. 28.—The demand and supply are fair. We quote: White comb, 1lb., 15@16c; dark, 10@12c. Extracted—White, 7c; dark, 5@6c. Beeswax, is in light supply, and demand good, at 23@26c.

CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Nov. 28.—The demand is slow, with good supply, except choice comb. We quote: Choice white comb, 14@16c. Extracted, 5@8c. Beeswax is in good supply and fair demand, at 23@25c for good to choice yellow.

C. F. MUTH & SON,
Cor. Freeman & Central Aves.

NEW YORK, Nov. 27.—Demand for honey is fair, with adequate supply; buckwheat not so plentiful as clover. We quote: Fancy clover, 14@15c; fair, 1℔., 12@13c; buckwheat, 10c. Extracted, 7@7¼c. Beeswax, in fair demand, with adequate supply, at 25@27c.

CHAS. ISRAEL & BROS., 110 Hudson St.

CHICAGO, Nov. 28.—The demand is good for fancy white comb-honey, in 1-℔. sections, at 16c; other grades white, 14@15c. Extracted honey selling slowly, owing to warm weather We quote it at 6½@7½c. Beeswax, in light supply and good demand, at 26@27c.

S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Nov. 28.—Demand is good, with comb in fair and extracted in light supply. We quote: Comb—1-lb. fancy, 15@16c; dark, 12c. Extracted—White, 7@7½c; dark, 5@6c. Beeswax—None in market.

HAMBLIN & BEARSS, 514 Walnut St.

DETROIT, Nov. 27.—The demand for comb-honey is fair and supply moderate. We quote: Comb, 12@13c; extracted, 7@8c. Beeswax in good supply, and light demand, at 25@26c.

M. H. HUNT, Bell Branch, Mich.

CHICAGO, Nov. 28.—Demand is good and supply small of gilt-edged stock. We quote: Choice white comb, 14@16c. Extracted, 6@8c. Beeswax, in light supply, and good demand, at 26@27c. J. A. LAMON, 44-46 S. Water St.

MILWAUKEE, Nov. 25.—Demand fair and supply good, except of the best quality. We quote: Comb—choice, 1-lb., 15@16c; fair, 13@14c; dark, 10@12c. Extracted—white, in barrels or kegs, 7½@8c; dark, 6@6½c. Beeswax, 23@28c.

A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO, Nov. 24.—Demand good, supply small. We quote: Comb, 1-lb., 10@13c. Extracted, 5½@6½c. Beeswax, in light supply and good demand, at 23@24c.

SCHACHT, LEMCKE & STEINER,
16 Drumm Street.

NEW YORK, Nov. 27.—Demand moderate, and supply reduced, with no more glassed 1-℔ nor paper cartons, 1-℔. We quote: Comb, 1-℔, 14@15c. Extracted—Basswood, 7¼@7½c; buckwheat, 5½@6¼; Mangrove, 68@75c per gal. Good demand for dark extracted honey. Beeswax, in fair supply, with small demand, at 26@27c.

F. G. STROHMEYER & CO., 122 Water St.

CHICAGO, Nov. 28.—Demand is now good, supply is not heavy. We quote: Comb, best grades, 15@16c. Extracted, 6@8c. Beeswax, 26@27c. R. A. BURNETT, 161 S. Water St.

BOSTON, Nov. 27.—Demand is good, supply ample. We quote: 1-℔. fancy white comb, 15@16c; extracted, 7@9c. Beeswax, none in market.

BLAKE & RIPLEY, 57 Chatham St.

ALBANY, N. Y., Nov. 27.—Demand is good, and supply liberal. We quote: White comb, 14@16c. Extracted—White, 7½@8½c; dark, 6@6½c. Beeswax, supply light, and demand good at 28@30c.

H. R. WRIGHT, 326-328 Broadway.

NEW YORK, Nov. 27.—Demand is fair, and supply ample, except buckwheat comb. We quote: Fancy white comb, 14@15c; buckwheat, 10@11c. Extracted—Clover and basswood in good demand at 6@8c; buckwheat in demand at 5½@6½c. Beeswax in fair demand at 26@28c.

F. I. SAGE & SON, 183 Reade St.

If You Have any honey to sell, get some Honey Almanacs and scatter in your locality. They will sell it all in a very short time. We have a few Almanacs for 1891, which we are selling at half price.

Money in Cabbage and Celery.—"Blood will tell." Good crops cannot be grown with poor strains of seed.

For 16 years Tillinghast's Puget Sound Cabbage, Cauliflower and Celery Seeds have been gaining in popularity. The most extensive growers all over the Union now consider them the best in the world. A catalogue, giving full particulars regarding them, will be sent free to any one interested. When writing for it, enclose 20 cents in silver or postage stamps, and we will also send "HOW TO GROW CABBAGE AND CELERY," a book worth its weight in gold to any grower who has never read it. Address

ISAAC F. TILLINGHAST,
18A16t La Plume, Pa

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line,** for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

WANTED—1,000 pounds of choice comb-honey. Will pay 25 cents for first-grade white clover honey, graded by rules adopted at Northwestern Convention. Address B. WALKER, Capac, Mich., or Glen Haven, Wis.
23A1t

Mention the American Bee Journal.

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the BEE JOURNAL (with $1.00 to pay for the same), or 2 subscribers to the HOME JOURNAL may be sent instead of one for the BEE JOURNAL.

◆

Well Pleased.

The October number of the HOME JOURNAL came duly, also the premium of $2.00 in cash, for which please accept my thanks. I shall be pleased to answer any inquiries concerning your honorable dealings with me.

Belleville, Pa. KATE M. BOYER.

[Enclose an addressed postal card for reply.—ED.]

◆

We Have only a few Binders left of the large size, for the BEE JOURNALS previous to this year. If you want one, please send at once, before all are gone, as we shall not have any more made. Price, 60 cents.

◆

We Club the American Bee Journal and the Illustrated Home Journal, one year for $1.35. Both of these and Gleanings in Bee Culture, for one year, for $2.15.

◆

Pleasant Surprise.

Your draft for $2.00 as a premium for answer to the rebus came to hand to-day, and was a pleasant surprise. On account of the distance from Chicago I feared that I could not get the answer to you in time to be on the first list of names, so that I might obtain the prize. I hope to be as well or better pleased with the perusal of the ILLUSTRATED HOME JOURNAL in my leisure hours.

P. S. GRINDLE.

Brooklyn, Ala., Oct. 29, 1891.

Advertisements.

WONDER STRAWBERRY

Produced a FULL CROP in OCTOBER

Get facts and testimonials in Catalogue.

Golden Rule Nursery, Hartford City, Ind.
23-24-1-2
Mention the American Bee Journal.

Rural Life!

100 Pages—Price, 25 Cents.

RARELY is such a collection of valuable ideas embodied in a pamphlet like this Its scope is as broad as its title, and the matter is presented in a concise, "boiled-down" manner, giving experience of many in few words. Among the subjects treated are these: Economy; Prosperity and Adversity; Character; Health; Remedies; Mistakes of Life; Is Life worth Living; Domestic and Household Affairs; Planting and Culture of Vegetables; Planting, culture, trimming and training Vines, Trees and Plants; Bees, Poultry, Live-Stock, Farm Topics, Pithy Paragraphs, etc. It is neatly bound in paper covers, and has a comprehensive index.

FREE AS A PREMIUM We will present this Book to any person sending us one new subscriber for this JOURNAL, with the subscription price for a year.

THOMAS G. NEWMAN & SON,
199, 201, 203 East Randolph St., CHICAGO, ILLS.

PATENTS THOMAS P. SIMPSON, Washington D. C. No atty's fee until Patent obtained. Write for Inventor's Guide.
19D13t
Mention the American Bee Journal.

$2,000 PER ACRE!

A NEW FRUIT!

Facts on file that it has produced the above, second year. Get Catalogue.

Golden Rule Nursery, Hartford City, Ind.
23-24-1-2
Mention the American Bee Journal.

EARLY QUEENS

From our Choice 5-Banded stock, ready to ship from branch apiary in Texas, in March, warranted purely mated, $1.25; six for $6.00.

BREEDING QUEENS,

$3.00 to $5.00 each. Our bees are excellent workers, gentle and beauties. Safe arrival and entire satisfaction guaranteed.

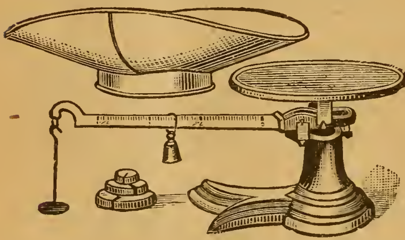
1D27t **S. F. & I. TREGO, Swedona, Ill.**
Mention the American Bee Journal.

FRUIT TREES AT WHOLESALE

Get our catalogue and save 50 per cent.

Golden Rule Nursery, Hartford City, Ind.
23-24-1-2
Mention the American Bee Journal.

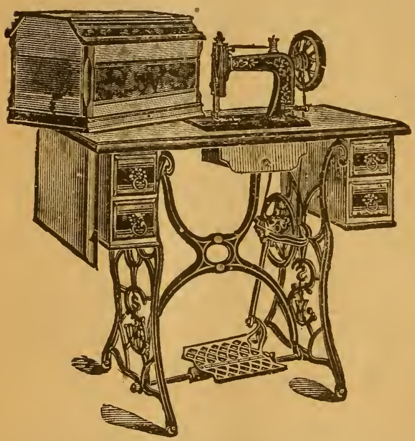
"LITTLE DETECTIVE" SCALE.



This is the justly popular "Little Detective" Scale, and weighs from ¼ ounce to 25 pounds. Price, $2.50 by express.

Given for 8 subscribers, at $1.00 each.

Singer Style Sewing Machine.



Each machine is THOROUGHLY TESTED to see that it is perfect before leaving the Factory, and the manufacturers GUARANTEE EACH MACHINE FOR FIVE YEARS.

ALL THE MATERIAL entering into the construction of these machines is of the very best, and all the parts are nicely fitted. The wood work is of Black Walnut, Oil Polished. The iron work is nicely ornamented and Japanned, and they are an ornament in any lady's room. With each machine we include a **full set of attachments** which have formerly sold for as much as we now offer the machine, attachments and all.

These attachments include one Johnson's Foot Ruffler, one set of Hemmers, one Tucker, one Foot Hemmer or Friller, one Package of Needles, six Bobbins, one Screw Driver, one Oil Can, extra Check Spring, one Gauge, one Gauge Screw, one Wrench, and an Instruction Book, which will enable one not accustomed to running a machine, to soon learn.

Each machine is crated and delivered at the Express office or Freight depot in Chicago, and will go safely to any part of the country. The weight is about 100 pounds, and the cost of shipping within 500 miles of Chicago is from 50 cents to $1.00; to the Atlantic Coast, the Gulf or about the same distance West, about $1.50; and about double this to the Pacific Coast.

Price, $15.00. Given for 60 Subscribers; or for 40 subscribers, with $5.00 extra; or for 20 subscribers, with $10.00 extra.

INSECTS AND INSECTICIDES

A PRACTICAL MANUAL,

CONCERNING NOXIOUS INSECTS AND THE METHODS OF PREVENTING THEIR INJURIES.

BY CLARENCE M. WEED,

Professor of Entomology and Zoology, New Hampshire State College.

It has been prepared with the idea of furnishing a short account of the injurious insects, and the latest and best remedies for them. It is profusely illustrated, and handsomely bound.

In the introduction there is a short discussion of the Transformations of Insects; Natural Enemies of Injurious Insects; the Principal Insecticides; Methods of applying Insecticides, with especial reference to Spraying; and Directions for Collecting and Preserving Insects.

"Dr. Weed's new book is a handy volume of nearly 300 pages, illustrated with 143 illustrations, and 7 full-page plates. The style is simple and non-technical, and the important facts are condensed in a clear, concise manner. The work will prove useful to the fruit-grower, general farmer and housekeeper, and will unquestionably meet a demand among those who have not access to entomological libraries."—INSECT LIFE.

Sent, postpaid, to any address for $1.25.

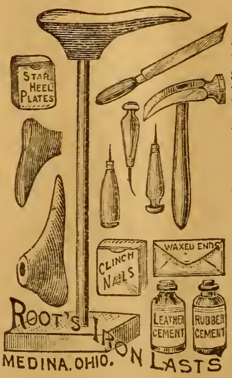
Given for 6 new subscriptions for one year at $1 each.

Wet Feet, a Cold, Doctor's Bill

DEATH AND FUNERAL EXPENSES, COST ABOUT **$200.**

Root's Household Repairing Outfit,

Costs **$2.** Take your choice.



This Outfit is a combination of practical, tried, common sense Tools and Materials that will enable anyone with ingenuity enough to drive a nail, to do his own half-soling, boot, shoe, rubber and harness repairing, right at home. No pegs required. Simple wire clinch nails. Saves time, trouble, expense and vexatious "shoemaker's promises." Entire Outfit, neatly boxed, only **$2.00.** Send for descriptive Circular.

Given for 6 new subscriptions for one year, at $1.00 each.

Famous Fiction by the World's Greatest Authors!

A CHARMING SET OF BOOKS,

EMBRACING

Ten of the Greatest Novels Ever Written

BY TEN OF THE

GREATEST AUTHORS WHO EVER LIVED!

If you will study the biographies of the great authors of our day, you will observe that in most instances their reputations were made by the production of a single book. Let but one work that is really great—one masterpiece—emanate from an author's pen, and though his future efforts may be trivial in comparison, his name will live and his works be read long after the author has passed away. A well-known New York publishing house has issued in uniform and handsome style ten of the greatest and most famous novels in the English language, and we have perfected arrangements whereby we are enabled to offer this handsome and valuable set of books as a premium to our subscribers upon terms which make them almost a free gift. Each one of these famous novels was its author's greatest work—his masterpiece—the great production that made his name and fame. The works comprised in this valuable set of books, which are published under the general title of "Famous Fiction by the World's Greatest Authors," are as follows:

FAMOUS FICTION
BY THE WORLDS GREATEST AUTHORS
EAST LYNNE
By Mrs. Henry Wood.
UNCHANGED AND UNABRIGED
VANITY FAIR
LADY AUDLEY'S SECRET
ADAM BEDE
JANE EYRE

EAST LYNNE,
By Mrs. Henry Wood.

JANE EYRE,
By Charlotte Bronte.

JOHN HALIFAX, GENTLEMAN,
By Miss Mulock.

ADAM BEDE,
By George Eliot.

THE WOMAN IN WHITE,
By Wilkie Collins.

LADY AUDLEY'S SECRET,
By Miss M. E. Braddon.

VANITY FAIR,
By W. M. Thackeray.

THE LAST DAYS OF POMPEII,
By Sir E. Bulwer Lytton.

THE THREE GUARDSMEN,
By Alexander Dumas.

PUT YOURSELF IN HIS PLACE,
By Charles Reade.

Each of these great and powerful works is known the world over and read in every civilized land. Each is intensely interesting, yet pure and elevating in moral tone. They are published *complete, unchanged* and *unabridged,* in *ten separate volumes,* with very handsome and artistic covers, all uniform, thus making a charming set of books which will be an ornament to the home. They are printed from new type, clear, bold and readable, upon paper of excellent quality. Altogether it is a delightful set of books, and we are most happy to be enabled to afford our subscribers an opportunity of obtaining such splendid books upon such terms as we can give.

Price 75 cents, or given for three new subscriptions for one year, at $1.00 each.

BEST ATLAS IN THE WORLD

FOR THE PRICE.

130 PAGES, EACH 14 BY 11 INCHES. OVER 200 LARGE MAPS AND ILLUSTRATIONS.

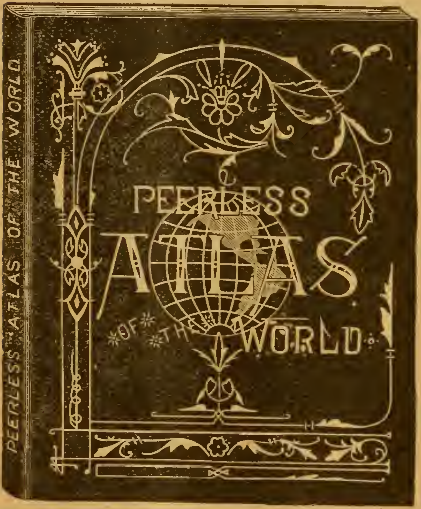
Only $1.60 for the Atlas and this Paper for one year.

Both mailed to any address, postpaid.

The Atlas will be given as a premium for 2 new yearly subscriptions, at $1 each.

It Gives the Population, by the Census of 1890,

Of each State and Territory, of all counties of the United States, and of American Cities with over 8,000 inhabitants.



Size, Open, 14 by 22 Inches; Closed, 14 by 11 Inches.

The Peerless Atlas meets the wants of the people more completely than any similar publication ever published. **For the price, it stands "Peerless"** in every sense of the word. The edition for 1892 contains new maps of southern states never before published, while accurate and timely information, statistical and otherwise, is brought down to the latest date. As an atlas and general reference book it is broad and comprehensive, valuable alike to the merchant, the farmer, the professional man, in fact, everybody. **It is equal to any $10.00 Atlas.** To keep pace with the progress of the age, to understand comprehensively and intelligently the current happenings daily telegraphed from all parts of the earth, you must have at hand the latest edition of the "Peerless Atlas of the World."

LARGE AND MAGNIFICENT ILLUSTRATIONS embellish nearly every page of the letter-press matter, and faithfully depict scenes in almost every part of the world. They are intensely interesting and constitute an art collection which will be viewed with pleasure and admiration for years to come. Among these are included illustrations of 10 of the principal buildings to be erected for the World's Fair, at Chicago, in 1893.

The Peerless Atlas has as Large and Fine Maps as are found in $5.00 and $10.00 Atlases.

By the reference index, counties and county-seats may be readily found on the maps.
The maps are handsomely colored, most of them in six colors.
It contains colored county maps of all the states and territories.
Shows all countries on the face of the earth.
Has the latest railroad maps, and rivers and lakes are accurately located.
The large cities of the world are on the maps.
The important towns and most of the villages of the United States are on the maps.
It gives a classified list of all nations of the earth, with form of government, geographical location, size and population.
Population of each state in the Union for the past fifty years.
A condensed history of each state.
Miles of railroad in each state.
The peculiarities of soil and climate, together with the chief productions, principal industries and wealth of each state.
The educational and religious interests of each state.
List of all the Presidents of the United States.
The popular and electoral votes for president in 1880, 1884 and 1888, by states.
The agricultural productions of the United States.
The mineral products of the United States.
Homestead laws and civil service rules.
Statistics of immigration into the United States, 1820 to 1891.
Public debt of the United States for the past 100 years.
Commercial failures in the United States for 1889 and 1890.
Indebtedness of the world, with per cent of increase or decrease for 1880 and 1890.
Gold and silver statistics of the United States.
Interest laws and statutes of limitations for each state and territory.
Exports of breadstuff and petroleum for 1889, 1890 and 1891.
Number and value of farm animals in the United States.
The cultivable area of the United States as compared with increase of population.
Postal information, with rates.
And much other information that should be in all homes, stores and offices.

It contains a General Description of the World, giving its physical features—form, density, temperature, motion, the seasons, climatic conditions, winds and currents; distribution of land and water; heights of mountains and lengths of rivers; races of people and their religions; a historical chapter on polar explorations; also the most complete list of nations ever published, giving their geographical location, area, population and form of government. Every school boy and girl, as well as college student, will find it an invaluable aid in the study of geography in all its phases, and parents should not fail to provide their children with it, and thus place in their hands a potent and comprehensive educational aid, supplementing and assisting the work of the school.

THE AMERICAN BEE JOURNAL CIRCULATES ALL OVER THE WORLD.
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

Club Rates,—Two copies, **$1.80**; 3 copies, **$2.50**; 4 copies, **$3.20**; 5 copies, **$3.75**. Mailed to any addresses.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVIII. Dec. 10, 1891. No. 24.

Editorial Buzzings.

The Report of the National Bee-Keepers' Union will be published in next week's BEE JOURNAL. The annual dues for 1892 can be paid at any convenient time. One dollar will cover the whole cost for 1892.

◆

The District of Columbia has decided to ask Congress for an appropriation of $50,000 to enable it to make a creditable exhibit at the World's Fair.

◆

These States were represented at the Northwestern Convention last month: Florida, Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio and Wisconsin. The officers for the ensuing year are: C. C. Miller, President; J. A. Green, Vice-President; W. Z. Hutchinson, Secretary; and Thomas G. Newman, Treasurer.

The Illinois State Bee-Keepers' Association will meet at Springfield next week. This is an important meeting, and we hope that all who can do so will attend and take part in the deliberations. Several have written to us to know whether we expect to be there, and in reply we will say that while we fully intended to be present, we have been compelled to give up the idea. We are much better than we were during the Northwestern Convention, but do not yet feel able to leave home; and, besides, our office work has run so far behind on account of our illness, that to leave it now would increase the burdens and make them intolerable. No; we shall be present in spirit, both at Albany this week and at Springfield next week—but not in body. We submit to the inevitable as gracefully as possible.

◆

The Grading of Honey will hereafter be a very easy matter if the North American Association at Albany this week shall adopt a grade schedule, when the committee from the Northwestern shall submit the matter for consideration. Then there need be no dispute as to what grade any comb-honey belongs, and it can be sold any where without furnishing a sample, like wheat, etc.

◆

The "Bee-Keepers' Magazine" is the new name adopted by Mr. A. K. Cooper, Winona, Minn., for his new bee-periodical. He has accepted our suggestion as to name, and we wish the newcomer success.

◆

The First catalogue for 1892 is on our desk. It is the price list of S. F. & I. Trego, of Swedona, Ills.—Italian Queens.

◆

It Will Not hurt you to smile once in a while. A cheering word makes the work easier, and the time passes the more quickly.

Women are engaging in bee-culture quite often of late, and the pursuit is attracting considerable attention as an occupation for women.

Mr. John H. Martin, in the September number of the *Illustrated American*, had an interesting article on bee-keeping. Women, he wrote, find in bee-keeping an occupation particularly well suited to them. The bees and their ways are among the most fascinating of all marvels of nature to the student, and the various manipulations and the management of the bees require a delicacy and an intuition that makes the pursuit one in which women should excel.

On the courage required when beginning to handle bees, he writes thus:

> It is true that courage approaching the heroic is required of the beginner. To go near a hive and manipulate its very animated and busy inmates is a ticklish business at first. When we approach a bee-hive we find the entrance guarded by a score or more of vigilant sentinels, who resent any intrusion upon their domain. An incautious rap upon the hive will arouse the entire community to active warfare, and woe to the unprotected or unskillful person who thus becomes the object of their vindictiveness.
>
> With a little experience the danger of exciting their quick susceptibilities diminishes, the fear of stings becomes less, and the hand that trembles at the first encounter with the bees becomes steady as a veteran's.
>
> Then the interest of the beginner in the occupation grows rapidly, not only from the pleasure of having overcome imposing obstacles, but also from increasing knowledge of the habits of the bees.
>
> In the study of the habits of the honey-bees we find that their first impulse, as a stranger approaches, is war. If their attack is in vain, the bees then seek to save as much of the precious sweets as possible. Each one fills its honey-sac, and if time enough is given for all to become loaded they are very tractable, and can be manipulated easily.

◆

The Department of Electricity is making an effort to secure a complete collection of historical electrical apparatus, in order to show the progress of the science from early times, at the World's Fair.

Programme of the convention to be held at the State House, Springfield, Ills., on Dec. 16 and 17, 1891:

Dec. 16, 10:30 a.m.—Prayer by Rev. Dr. Johnson.

Welcome Address.—G. F. Robbins.

11:00.—What the laws should be relating to apiculture.—Hon. J. M. Hambaugh.

11:30.—Discussions and recess.

1:30 p.m.—Fertilization of plants by honey-bees.—Mrs. L. Harrison.

2:00.—Question-box and discussions.

3:30.—Bees for the average farmer.—Col. Chas. F. Mills.

Dec. 17, 9:00 a.m.—The future of the Illinois State Bee-Keepers' Association.—Dr. C. C. Miller.

10:00.—Question-box and miscellaneous.

11:00.—Statistics of the honey product of 1889 and 1890.—Secretary.

1:30 p.m.—Are bees an injury or a benefit to horticulturists?—A. C. Hammond.

2:00.—Question-box. Adjournment.

◆

Director-General Davis and Chiefs Buchanan and Peabody, respectively of the Agricultural and Liberal Arts Departments of the World's Fair, have held a conference with a number of gentlemen representing nearly fifty agricultural colleges and experimental stations in the United States, regarding exhibits from such institutions. It was practically decided that a complete experimental station, showing the work by students and the results secured, will be established in connection with the agricultural exhibit, and that the exhibit by the agricultural colleges will be made in the Liberal Arts Department.

◆

The 1892 Catalogue of G. B. Lewis Co., of Watertown, Wis., is on our desk. It contains 36 pages, and gives full particulars about their hives, frames, sections, etc.

◆

Ground Cork is the best packing material for bees in Winter. It never becomes damp, and it is a thorough non-conductor. It is so cheap that its cost is practically nothing.

For a Funny Item commend us to the following from a late copy of the Elgin, (Ills.,) Daily *Courier*, sent to us by friend Frank Blecka, one of our subscribers at Elgin. It is a strange admixture of fact and fancy—the latter predominating. Here it is:

There must be no competition against our native American bee, though it can kick harder and get its temper up quicker than any other bee alive. Italian queen bees, imported to tame down our native product and make it more biddable-like, must pay a duty of 20 per cent. *ad valorem*. A curious instance of how the best of men will evade customs duties, if they can, happened lately.

A citizen of Iowa wished to import some Italian bees to improve his breed of natives. For some reason the insects were sent through the mails. Whether some nervous post-office clerk smelled out the bees, or in whatever way their contraband presence became known to the collector of the port of New York, he detained them until he sent word to Washington about them.

They were only released when the owner paid duty on them. Thus he lost his postage and his temper, and lost in the value of his queen bees. Their nervous system suffered severe shock from thus being held as smuggled goods. The affair will be known as the Iowa queen-bee case.

◆

Plans for the exercises dedicatory of the World's Exposition buildings during the week of Oct. 12, 1892, are fast being matured. One of the chief features practically decided upon is a nocturnal procession of floats on the illuminated lagoons at Jackson Park. These floats will represent a chronological epitome of salient historical events by centuries, from 1492 until the present time. Altogether there will be between forty and fifty floats costing perhaps $700 each on an average. The last one will represent Chicago welcoming the nations of the earth. All of the floats will fairly blaze with electric lights, and thousands of incandescent lamps under the water will give them the appearance of floating on a lake of fire. It is believed that fully 50,000 people will watch this gorgeous spectacle each night from the banks of the lagoon.

The speech making, choral exercises, etc., will occur in the Manufacturers' Building, which will be fitted with seating accommodation for 80,000 to 100,000 people. It is now thought that from 12,000 to 15,000 troops will participate in the dedicatory exercises. The expense of the dedicatory ceremonies will approximate $200,000.

◆

In the programme of the 26th annual convention of the Michigan State Bee-Keepers' Association, to be held at the Eagle Hotel, Grand Rapids, Mich., on Dec. 31, 1891, and Jan. 1, 1892, are the following essays:

Annual Address—President Robert L. Taylor.

The best all-purpose brood-frame—J. H. Larrabee, Agricultural College, Mich.

The bicycle *vs.* the horse for out-apiary trips—E. R. Root, Medina, O.

Bees, poultry and fruit—J. A. Pearce, Grand Rapids, Mich.

Trying new things—W. Z. Hutchinson, Flint, Mich.

Cellar *vs.* out-of-door wintering—A. J. Acker, Martiney, Mich.

What business can be profitably combined with bee-keeping?—Wm. E. Gould, Fremont, Mich.

Cause and cure for foul-brood—Dr. A. B. Mason, Auburndale, O.

Uses and abuses of comb-foundation—M. H. Hunt, Bell Branch, Mich.

Carniolan bees—H. D. Cutting, Clinton, Mich.

Reduced rates of $1.25 per day have been secured at the Eagle Hotel, with a nice room to meet in under the same roof. Everything promises one of the best meetings ever held in the State. There will be reduced rates on all railroads.

◆

If You Have any honey to sell, get some Honey Almanacs and scatter in your locality. They will sell it all in a very short time. We have a few Almanacs for 1891, which we are selling at half price.

Compartively few people are aware that Chicago has a building almost wholly built by the students of an industrial school. The new building of the Institute of Technology, 147 Throop street, is the first building west of New York city ever put up wholly, or in part, by students. No better evidence of the practical character of the instruction of a school could be desired.

The teaching of trades is in accordance with the broad plan of this institute, which proposes to teach "any person any study day and evening." The organizntion of evening classes in plumbing and bricklaying, as well as architecture, electricity and engineering, began on Nov. 16. Draughting of all kinds is made a specialty, three instructors being employed.

A desirable opportunity is thus offered young men to "earn better wages."

With Pleasure we announce that Mr. Henry Alley has sent, through us, a check payable to Mr. James A. Green to cover his claim for queens, as mentioned on page 626. Being unable to fill the order in proper time, the return of the money disposes of that claim.

A reply to Mr. Green's criticisms accompanied the check, but as it contained unpleasant allusions, we wrote to Mr. Alley, suggesting their modification; this he declined, and requested its return, which has been complied with.

Some "points" made by other correspondents have been *sharp* and *stinging*, and it would have been better had all such been omitted, for any controversy becomes unprofitable when it descends to personalities. Had Mr. A. consented to his reply being *toned down*, we should have cheerfully published it. This statement will explain to all concerned the reason for concluding the controversy at this point, while all feel pleasant. Mr. Alley concludes his last letter thus: "No ill-will—all good nature." This is, therefore, the best time to stop.

Quite a Number of honey dealers attended the Northwestern Convention—two of whom were extensive commission merchants of Chicago. Apiarists and honey dealers should be good friends. Their interests are almost identical.

November brought us 1,587 new subscribers for the ILLUSTRATED HOME JOURNAL. It is a charming success. We will send it and the BEE JOURNAL to any one for 1892 for $1.35. When renewing for the BEE JOURNAL, add 35 cents for the HOME JOURNAL, and you will not regret it. It is fresh, interesting and sparkling, and will bring cheer to your whole household. The January number will be a treasure.

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms.

Convention Notices.

☞ The annual meeting of the Colorado State Bee-Keepers' Association will be held in Denver, Jan. 18 and 19, 1892.
H. KNIGHT, Sec., Littleton, Colo.

☞ The Michigan State Bee-Keepers' Association will meet in Grand Rapids, Mich., on Thursday, Dec. 31, 1891, and Friday, Jan. 1, 1892, GEO. E. HILTON, Sec., Fremont, Mich.

☞ The Huron, Tuscola and Sanilac Counties Bee-Keepers' Association will meet at Concordia Hall, Sebewaing, Mich., on Dec. 15, 1891. All interested are cordially invited to attend, and help make this one of the best meetings ever held by this association.
JNO. G. KUNDINGER, Sec., Kilmanagh, Mich.

☞ A special session of the California Bee-Keepers' Association, in honor of the visit of Prof. A. J. Cook and A. I. Root, will be held in Los Angeles, Calif., at the Chamber of Commerce, Jan. 6 and 7, 1892. The California permanent exhibit in an adjoining room, will no doubt be of interest to all.
C. W. ABBOTT, Prest.
G. W. BRODBECK, Sec.

☞ The annual meeting of the Illinois Bee-Keepers' Association will be held at the State House in Springfield, on Dec. 16 and 17, 1891. Excursion rates are arranged for on all the roads leading into Springfield, on the certificate plan, and reduced rates at hotel secured. Essays will be read by prominent bee-keepers of the State on all matters of general interest to bee-keepers, following which will be discussions, answering the contents of the question-box, etc. Among those expected to participate will be: Hon. J. M. Hambaugh, Mrs. L. Harrison, G. F. Robbins, Dr. C. C. Miller, A. C. Hammond and others. For programme and other information, address
JAS. A. STONE, Sec., Bradfordton, Ills.

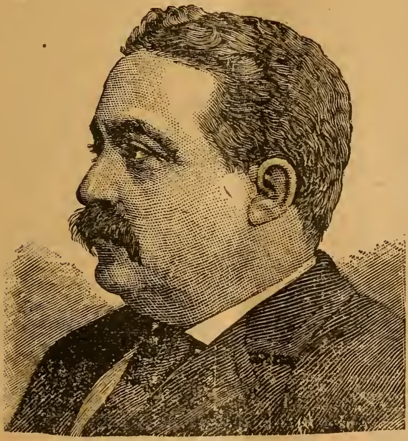
BIOGRAPHICAL.

W. I. BUCHANAN.

The interview of Dr. A. B. Mason with Mr. Buchanan, the Chief of the Agricultural Department of the World's Columbian Exposition, was mentioned in the BEE JOURNAL of last week, on page 711.

Knowing that our readers will be pleased to learn what kind of a man the Chief is, we herewith present an engraving and some account of his past life:

William Insco Buchanan is a man of excellent physique, with broad shoulders and deep chest. He is very active, and is full of vitality and business vim. He readily grasps details, formulates plans, and has the nerve to carry them into execution.



W. I. BUCHANAN.

As Chief of the Agricultural Department of the World's Columbian Exposition, Mr. Buchanan has accomplished wonders as an originator, organizer, architect and conductor of the the multifarious factors entering into the composition of his vast department. In a word, the outcome of all his labor promises to be an unqualified success;-a result due the importance of the department and well deserved by the man.

The following biographical notes from an exchange, and particulars as to the work accomplished by Mr. Buchanan, will be read with interest:

W. I. Buchanan was born near Covington, O., September 10, 1853. He was left an orphan when eight years old, and spent his boyhood and early manhood on his grandfather's farm, near his birthplace. He was given a common school education, to which was supplemented an extensive course of reading. In latter years he learned the trade of an edge-tool maker, which he followed for several years. Later he entered mercantile life, which he has followed ever since.

He removed to Sioux City, Iowa, in 1882, from Dayton, Ohio, and is one of a large firm engaged in the jobbing-trade there. He is widely known as an amusement manager throughout the country, and was one of the chief executive officers of the great Corn Palaces that have become known throughout this entire country, and have made Sioux City famous.

Upon the formation of the World's Columbian Commission he was appointed by Governor Boies a member of that body from Iowa. In December, 1890, he was appointed by Director-General Davis to the position of Chief of the Department of Agriculture, and in January, 1891, had assigned to him temporarily the Departments of Live Stock and Forestry.

The Agricultural Department was organized on December 12, 1890, but its affairs were conducted from Sioux City, Iowa, the residence of the Chief, until March 15, 1891, from which date the work has been carried on from Exposition Headquarters at Chicago.

An outline plan of the work to be accomplished was formulated, and correspondence begun with the officers of the various farmers' organizations and State Boards of Agriculture, and manufacturing industries represented in the scope of the Department.

The idea was to put the Department as promptly as possible in touch and sympathy with those most interested in its success, and to obtain suggestions of practical value from persons most competent to make them.

In order to accommodate fully the exhibit of farming tools and implements, Chief Buchanan asked for the construction of an annex, which was granted, and will be erected south of the Agricultural Building. It will be 300x500 feet. Applications for space already received indicate that there will be a great exhibit in this line.

In order to afford a common meeting point for farmers and live stock men, an Assembly Hall, connecting the Agricultural and Machinery Buildings, has been asked for by Chief Buchanan, and will be erected.

The building will contain a commodious hall for public meetings and for the discussion of practical questions bearing upon agricultural interests, and also committee rooms and office headquarters for the convenience of the various live stock associations and farmers' organizations.

In all probability the Assembly Hall can be obtained for the North American Bee-Keepers' Convention in 1893, if it is desired, and an early application be made for its use.

Of course, the National Convention of 1893 should be held in Chicago, but at an earlier date than it is held this year, which is an exceptionally late one.

Queries and Replies.

Eradicating Sweet Clover.

Query 796.—1. Is sweet clover readily eradicated from land after it has become established? 2. If so, what is the best way to do it?—C.

Not being an agriculturist, I do not know.—J. E. Pond.

The only trouble here, is to get it to grow.—G. L. Tinker.

1. Yes. 2. Prevent it from seeding for one season.—M. Mahin.

I have had no experience with sweet clover.—J. M. Hambaugh.

1. Yes. 2. By plowing—that is, in this locality.—G. M. Doolittle.

1. Yes. 2. By plowing the ground before seed time.—Dadant & Son.

1. Yes. 2. Plow and raise cultivated crops for two or three years.—R. L. Taylor.

1. Yes. 2. Put the land into plowed crops for two years, or turn it into pasture, and animals will make short work of it.—C. H. Dibbern.

1. Yes. 2. Cultivate the ground—planting corn or potatoes.—Mrs. L. Harrison.

1. Yes. 2. By plowing and raising some cultivated crop, or a grain crop, or both.—A. J. Cook.

1. It certainly is in my locality. 2. It yields to the plow just like red clover.—G. W. Demaree.

1. Yes. 2. Keep it from going to seed for two years is the best and only way.—A. B. Mason.

Keep it cultivated, and do not allow it to go to seed, and you will have no trouble.—H. D. Cutting.

It can very readily be eradicated by planting the land with a crop that needs cultivation.—J. P. H. Brown.

1. I think so. I never saw it in cultivated fields. It seems to thrive best by the roadside and in waste places.—E. Secor.

1. Yes. It is a biennial. 2. Cut it down while in bloom two or three times in succession, and that settles it.—James Heddon.

Yes. As it dies root and branch after blossoming, all that is necessary to free the land, is to prevent it from seeding for two years (being a biennial), and there will be no more of it growing. It is easy to do it, by plowing the land while it is in bloom, before the seed matures.—The Editor.

The Christmas number of *Frank Leslie's Weekly* is simply superb. It is even better than last year's, and that is saying a great deal. Its cover reminds one strongly of English publications, but its pages are filled with the best of American art and letter-press. Its double-page represents the crusade of the children in the thirteenth century, when over 300,000 of these little people lost their lives in attempting to recover the holy sepulchre at Jerusalem. Among other delightful pages are "A Slippery Day in Boston," and the exquisite reproductions of the work of some of America's best amateur photographers. For sale by all newsdealers. Price, 25 cents.

Topics of Interest.

English Editors and Punic Bees.

THOS. WM. COWAN.

The AMERICAN BEE JOURNAL for Oct. 29, page 562, contains an article by Mr. E. L. Pratt, headed "Some Facts About Punic Bees," which contains charges against me and Mr. Carr for which there is absolutely no foundation, and also false statements calculated to mislead.

The charges there made are so obvious that I can only suppose the insertion of the article was due to some slip on your part, and that as such you will give this letter the same publicity as you have given to the article in question.

The article seems also to insinuate that we had some personal and unworthy motive for concealing facts, which, it is plainly hinted, we must have known.

This sort of thing could be passed over with the contempt it deserved, if published in some low-class paper, but from the position of editor of the AMERICAN BEE JOURNAL, you will know that this is a serious reflection to cast upon us.

Mr. Pratt says: "The Punic stock in Mr. W. B. Carr's apiary in the Spring of 1890 was the 'best and strongest' he had (see *Record*, an English bee-periodical, for June, 1890)."

That paragraph is calculated not only to mislead, but also to deceive. Firstly, because it states that Mr. W. B. Carr *had* a Punic stock, and secondly, the *Record* is referred to in support of this statement. Now, Mr. Pratt has either not seen the *Record* and is writing from some one's report, or, if he has seen it, he is deliberately trying to make bee-keepers believe that in the *Record* for June, 1890, there is a statement by Mr. Carr respecting a Punic stock in his possession.

Will Mr. Pratt be surprised to learn that Mr. W. B. Carr has never had or seen a Punic stock in his life? And, also, that *not one word has ever been printed in the Record about the Punic bees, either editorially or by any of its numerous contributors!* Now, sir, by this post I send you the *Record* for April and June, in which you will see what was written by "Hallamshire Bee-Keeper," and that Punics are never even once mentioned, and how any one of common sense can connect these articles with Punics, I am certainly at a loss to understand.

An article in the April *Record* is headed "Queen-Rearing and its Connection with Safe Wintering." In this article Mr. Hewitt ("Hallamshire Bee-Keeper") puts forward a theory which is: "That if queens are properly bred in full stocks, and that no queen-cell is cut out and hatched in a nucleus or nursery, but strictly reared in a normal and natural condition, the bees of such queens will Winter safely, no matter how packed up, in what hives, or with what food, so long as the hives are kept dry, and the bees have stored the food."

Two ordinary queens were given to Mr. Carr for testing this theory, one of which queens arrived dead, and the other was introduced into one of his strongest stocks. In the following Spring he was asked by Mr. Hewitt to report, and stated in reply that the stock headed by this queen was "one of the best and strongest in my apiary to-day (April 17)." Please note that he says "one of the best," and not that it was "the best," as Mr. Pratt is trying to imply by the omission of part of the sentence. Although *one* amongst his best, it was by no means "the best."

In the June number of the *Record* alluded to by Mr. Pratt is the article headed "Report on the Hallamshire Queens." Here you will not find one word said about Punics, but Mr. Hewitt says he sends a report of how the queens sent out the previous year had Wintered. He says he sent addressed post-cards, and was "much disappointed at the small number of reports returned" (see *Record* for June, 1890). He then goes on to say that "the editor reports his as one of the best and strongest stocks," and also alludes to the remainder of the replies he had, of which there were six, who, although not all in favor, were not against, and ten were unfavorable. Mr. Carr, the editor above referred to, has never written one word in the *Record* about Punic bees, and Mr. Pratt's reference to the *Record* of June, 1890, in connection with Mr. Carr, is evidently intended to make people believe that Mr. Carr had written about them, whereas there is no more truth in this than there is that Mr. Carr ever had a Punic stock!

Mr. Pratt next says: "In answer to Mr. Lowmaster, in a late number of the *British Bee Journal*, they say they know nothing about the Punic bees, *Apis niger*." Now, this conveys a wrong impression, because the question in Mr.

Lowmaster's letter is: "Are they from Tunis, Africa?" And the reply is as follows: "We are acquainted with the bees of Tunis, but do not know of the existence of such a race as the so-called Punic bees in that country." This answer was given advisedly, for it was very rational for Mr. Lowmaster to ask if Punic bees came from Tunis, inasmuch as he would, if a scholar, naturally associate "Punic" with "Carthage," the site of which city we know was not far from Tunis. But—and this *but* was very important—I happen to know something about the bees of Tunis, and I can, therefore, say with confidence that I do not know of the existence of such a race as the so-called Punic bees in that country. I know of no race in that country answering to the descriptions that have been given of Punic bees. Nor do I know of the existence of *Apis niger* in that or any other country. The black bees of Tunis, Algiers and Morocco are all varieties of *Apis mellifica*.

Then Mr. Pratt goes on to say that, "In that same periodical for June 5, 1890, page 271, is a mention of Punic bees, and where they come from (see also *British Bee Journal* for May 29, 1890)."

It is quite true the first mention of Punic bees is in the *British Bee Journal* for June 5, and the description there given is from the person interested in them, Mr. J. Hewitt, and he there states "they came from North Africa, close to the borders of the great Sahara desert." (The *British Bee Journal*, with this reference and others to follow, are herewith forwarded).

Now, sir, if this is sufficiently explicit for Mr. Pratt, it is not for me. Scientific men are not, as a rule, satisfied with such vague definitions. What would you think if we spoke of Professor Cook as living in North America on the borders of Canada? Would you consider that sufficient to indicate his locality?

Not a word was said about Punic until Oct. 23, page 511, when Mr. Hewitt again writes under the title "Punic Bees," a short paragraph of 15 lines, referring to what some one had said in a gardening paper about them. In the same paper, on page 512, Mr. J. Luck asks for results respecting Punic bees.

Now, the *British Bee Journal* has a large circulation. I may say, without ostentation, that it has a *very* large circulation amongst bee-keepers, and is read by, I can safely say, very many more bee-keepers than all the other papers that give occasional bits about bee-keeping put together. Yet this appeal for results from those who had tried Punics met with no response. No, sir; *not one letter for or against did we receive to that appeal*, and, consequently, we had no opportunity of publishing anything about them from any one but Mr. Hewitt.

No doubt Mr. Pratt is surprised that the *British Bee Journal* refused to insert an advertisement, but I do not publish that journal for the purpose of making money out of it by advertisements or in any other way, and I reserve to myself the right to accept or reject an advertisement, or even an article. I am quite at a loss to see why Mr. Pratt has referred to the *British Bee Journal* for May 29, unless it is to make people believe that Punics are written about there, as well as in the number for June 5. Mr. Hewitt has an article headed "A Revolution in Queen-Rearing—Winter Dysentery," but there is no mention of Punic bees, and he makes reference to a "full report" of virgin queens, which we have already alluded to, in the *Record* for June, in which 10 out of 16 reports are unfavorable.

Mr. Pratt then goes on to say, "Why? Simply because Messrs. Cowan and Carr did not know that Punic bees were so hard to obtain from their native clime."

Now, sir, I think this is a most grave charge to make against us, as it imputes personal and unworthy motives in concealing facts about Punic bees. I have simply to say that there is not a shadow of truth in it, and that it is a barefaced invention.

I shall dismiss the allusion to the *Journal of Horticulture* by simply saying that it is a gardening paper and not a bee-periodical, and that for the same charges that Mr. Pratt makes in your journal, I have placed the matter in the hands of my solicitors, pending an action for libel against the editors of that paper.

I am obliged to you for publishing on page 554 my views on African bees. I have nothing to retract from what I said, but I should like to add that African bees have been for generations, it is believed, cultivated in Europe in perfect purity.

Scientific men are not in the habit of accepting anything without proof, and simply on the *ipse dixet* of any individual, and certainly, when marvellous stories are told, they are all the more cautious.

I trust you will give my refutation of the charges made by Mr. Pratt the same prominence that you have given to his articles.

London, Nov. 13, 1891.

[We had no idea that any of our correspondents would dare to quote, as proof of a position taken, and credit to a periodical, anything that it did not contain. Not suspecting any such dishonorable work, we have never taken any steps to verify quotations.

We have now examined the copies of the *Record* and *British Bee Journal* sent to us by Mr. Cowan, and find that his statements in the foregoing article are correct. But from our knowledge of that honorable gentleman we might have been sure of that, without examining the proof he has offered.

Probably Mr. Pratt has relied upon the statement made in the London *Journal of Horticulture* of Sept. 3; but as that paper has withdrawn the charges, made a public apology, and submitted to the destruction of all copies of that paper containing the libelous article—that proof is null and void.

We have now sent to Mr. Pratt the marked copies received from Mr. Cowan, and await an explanation.—Ed.]

Northwestern Bee-Keepers' Convention.

W. Z. HUTCHINSON.

Finding Queens.

The question was asked: "How long will take to find the queens in 50 colonies early in June?"

J. A. Green—Four hours.

A. I. Root—If the frames were metal-covered, and the colonies not too strong, such as we use in queen rearing, I could find the queens at the rate of one in two minutes—perhaps one in a minute.

M. M. Baldridge—I have a way of finding queens without taking out a comb. I rap on the hive, then raise the cover, and find the queen on top of the frames. By using a hive with a raised cover, such as Mr. Root makes for the Simplicity, I can drive the bees up into the cover, where they will cluster. By waiting a little while most of the bees will go back, and only a little cluster will remain, but the queen will be found in the cluster. The old bees go back first.

Wax Secretion.

M. M. Baldridge said a certain man in Wisconsin told him that bees do not build comb from the scales that are found between the abdominal rings. He asserts that these little scales are simply waste material. If the wax was made from these little scales there would naturally be an occasional scale left hanging, or partly detached. This is never seen. The combs are always smooth and complete. This man thought that the combs might be made from a sort of oil.

Messrs. Abbott and Mason stated that they had often seen the bees using these scales of wax in comb-building. One bee would stick on a scale, another would come along and give it a pat or a pinch, then another, etc., etc., and the wonder was that comb could be so accurately made as it is with such helter-skelter work.

President Miller—It looks to me as though this matter is not worth discussing. If such a communication as this should be sent to one of the bee-periodicals I think it would go into the waste-basket. How is it, Brother Root?

A. I. Root—Unless it came from some scientist, or one in whom we had confidence, I think that would be the fate of such an article.

President Miller—The whole matter reminds me very much of a man by the name of Cox—a Dr. Cox—who went about selling a hive in which he claimed that comb would *grow*. If we would only keep the bees in this hive, and put them in a warm cellar, the comb would *grow*, even in Winter. If it is a fair question, and you have no objection, Mr. Baldridge, I wish you would tell us who this person was that made such assertions.

M. M. Baldridge—Dr. Cox.

There was silence for a moment, then there went up such a shout of laughter that the cooks from the hotel kitchen heard it, and peeped slyly in at a side-door to see what caused the merriment.

Are Division-Boards Necessary?

E. T. Abbott—I have used them, but can see no advantage in their use.

W. Z. Hutchinson—What better is a division-board than a comb?

A. B. Mason—There is a space around the outside of a frame that allows the heat to escape.

W. Z. Hutchinson—True, but much depends upon the material of which a division-board is composed. If this room was cold, and we wished to divide it into two apartments, with a view to warming one of them, a division made of buffalo robes might be more desirable than one of cotton cloth, even though the latter fitted the walls snugly, while around the edge of the former was an open space of a few inches.

President Miller—The thermometer should settle these matters. Very carefully conducted experiments indicate that a comb, even with a space around it, is better than a division-board of wood that fits the hive closely.

J. A. Green—When closed-end frames are used, they do away with the space around the frames.

J. H. Larrabee—I have tried experiments with a lamp and thermometer in a hive, to decide which were preferable, combs or division-boards, and a dry comb, or one full of honey, is as good as a division-board.

E. T. Abbott—Space around the edge of a frame amounts to but little in this matter. The bees between the combs on the outside of the cluster keep in almost all of the heat; the comb that is on the outside of the cluster, yet with which the bees are in contact, is a better non-conductor of heat than an inch-board.

Consolidation of the Northwestern with the Illinois State Society.

It was thought desirable that the Northwestern Society should have the benefit of the $500 granted by the State of Illinois to the Illinois State Bee-Keepers' Association. The Northwestern has a good membership and attendance, but no money to work with except what little comes in as fees. The Illinois State Association is a new Society, but it has money to work with. It was thought desirable for the two societies to be united, and combine their forces, hence it was decided by vote that the Northwestern be merged into the Illinois State Sotiety, provided that the Illinois State Association will accept of the Northwestern, and will agree to hold one meeting more if necessary every year in Chicago. If the Illinois State Association accepts these terms, then the election of officers of the Northwestern will be void. All the old officers were re-elected.

The North American Convention.

C. P. Dadant, Secretary of the North American Society, urged bee-keepers to attend the coming meeting at Albany, N. Y. There has probably never been such a gathering of notables in the bee-keeping ranks as will assemble at Albany. Several important questions are to be brought up. Cheap sugar stares us in the face, and at Albany the question of securing a bounty on honey will be thoroughly discussed. It was surprising, the Secretary said, how few men worked for and secured the appropriations for the Illinois State Bee-Keepers' Society.

The Bounty on Honey.

A. I. Root said that if bee-keepers had a bounty on honey, the farmers would want a bounty on wheat and potatoes.

J. H. Larrabee—If the lowering of the price of sugar effects the price of honey, then honey producers are just as much entitled to a bounty as are the sugar producers.

R. A. Burnett—Honey is a commodity of itself. It is used for the purposes of which sugar will not answer. I cannot see that lowering the price of sugar has effected the price of honey at all.

J. A. Green—I have frequently heard grocerymen say that the low price of sugar has had an effect on the price and sale of honey. Consumers say: "We can't afford to pay so much for honey when we can make a syrup so much cheaper out of sugar, and we like it nearly as well."

C. P. Dadant—There are jellies and other sauces in the manufacture of which sugar is used, and these sauces come into competition with honey.

Honey Exhibits at the World's Fair.

Dr. Mason said that he had visited the Chief of the Agricultural Department of the World's Fair, and had been told that about ten feet square was as much space as could be given to each State for making an apiarian exhibit. This would put us on our metal to do our very best in a small space.

J. M. Hambaugh—The part of the appropriation for making an apiarian exhibit at the World's Fair has not yet been allotted by the Illinois State Board of Agriculture. It is really important that this Society should take action, or express its wishes in this direction.

Dr. Mason moved that a committee be appointed to bring the matter before the Board. Carried.

J. M. Hambaugh was appointed as that committee, and drew up the following petition:

To the Honorable Board of Agriculture of the State of Illinois:

The members of the Northwestern Bee-Keepers' Society, in convention assembled, do hereby respectfully petition your honorable body to allot, for a creditable exhibit of the products and appliances of the apiary, a just proportion of the amount appropriated by the Illinois State Legislature for the display of the agricultural products of this State at the Columbian Exposition, to be held in the city of Chicago, in 1893.

J. M. HAMBAUGH, *Chairman.*

Adopted.

The Grading of Honey.

The committee appointed to formulate a set of rules for the grading of honey was called upon to report, when it was found that not even *two* members could be found who could agree. It seemed a hopeless task to try to do anything. Finally each member was called upon to read over the rules for grading honey which had been presented to the committee. After some discussion the rules given by Mr. Baldridge seemed to meet with the least opposition, and the President suggested that Mr. Baldridge read the first section, and the Convention would dicuss and vote upon it. By going step by step it might be possible to agree upon *something*—enough to make a start. The point upon which there seemed to be the greatest disagreement was whether the word *white* should be applied when describing the first grade, it being argued, with a good show of reason, that there were first-grades of buckwheat and Spanish-needle honey, as well as of clover and basswood. On the other hand it was asserted that by common consent it came to be understood that only white honey was first-class. The following are the rules as they were amended and finally adopted by the Convention, for honey in the comb, crated:

FIRST GRADE.—All sections to be well filled; combs straight, of even thickness, and firmly attached to all four sides; both wood and comb to be unsoiled by travel-stain or otherwise; all the cells sealed, and the honey of uniform color.

SECOND GRADE.—All sections well filled, but with combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain, or otherwise, and the honey of uniform color.

THIRD GRADE.—Sections with wood or comb, or both, travel-stained or otherwise much soiled, and such as are less than three-fourths filled with honey, whether sealed or unsealed; and crates containing two or more colors.

The Society voted to adopt the foregoing rules as a whole, and to request the Secretary to present them to the North American Bee-Keepers' Association, at its next meeting, at Albany, for consideration, revision, and adoption.

Following the above rules, Mr. Baldridge had a note, which read as follows:

NOTE.—The color of the honey to be known as light, medium, and dark; the crates to be unsoiled, but if otherwise, the honey in such crates to be classed in the next grade below the one indicated in the instructions.

FOURTH GRADE.—All crates filled with honey not described in any of the foregoing grades.

The Convention did not see fit to adopt these "notes." It felt that it had done enough without that. It had made a commencement. Now we have something to work on, to discuss, and to free from fault. The adoption of these rules was really the most important work done by the Convention, and perhaps the most important that will be done by *any* convention this year.

Best Size for Shipping-Crates.

Very properly following the discussion on the grading of honey, came the question of the most desirable size for shipping-crates.

E. T. Abbott moved that the crates should hold a single tier, ranging in weight from 12 to 48 pounds.

R. A. Burnett—I should advise no crates to hold more than 24 pounds.

M. H. Mandelbaum—I quite agree with Mr. Burnett in that.

B. Walker—I would not think of using any crate holding two tiers.

Mr. Abbott's motion was then finally amended and carried in this revised form:

Resolved, That the Northwestern Bee-Keepers' Society advise the use of single tier crates, holding 12 to 24 pounds.

Package for Extracted-Honey.

Mr. Mandelbaum advocated the use of tin cans (60 pounds) for shipping extracted honey, putting two cans in a case.

O. O. Poppleton—Chas. F. Muth wants nothing but barrels.

A. N. Draper—I use empty glucose barrels. I get them at the candy factory, where they cost me only 50 cents.

E. T. Abbott—My business is largely the selling of honey. It is put up in the Muth jars, and is sold in the liquid state. If I find any beginning to candy in the hands of a dealer, I take it away and liquefy it. I do not like to buy honey in barrels, because if the honey is candied

I must knock out the head and dig out the honey. When honey is in a tin can I can put it in warm water to liquefy it, and it will run out.

It was voted that the Secretary be paid the balance remaining in the treasury after paying all legitimate bills.

The Treasurer, Thomas G. Newman, said that there were no debts to pay.

A vote of thanks was then given the proprietor of the Commercial Hotel for his kindness in furnishing free a room in which to hold the Convention, and to Mr. Newman for making all the arrangements for the meeting; that we were sorry for his indisposition, and hope for his complete restoration to health and strength.

Cases for Holding Shipping-Crates.

Byron Walker exhibited a crate similar to the one he submitted to Mr. J. T. Ripley, whereby he secured the ruling, allowing the glass in the crates to be shown, if protected. The slats in the case come opposite to the glass in the crates, but do not entirely conceal it.

J. A. Green avdised that the handles be put on in such a manner that the combs run parallel with the handles, as there would be less liklihood of the comb being broken if one end of the case be dropped down first.

The Convention then adjourned, and it is probably the last Convention the Northwestern will hold under that name, but the Conventions that will be held in Chicago each Fall will be the same as they have been, with the additional advantage of having money to use for its furtherance.

W. Z. HUTCHINSON, *Secretary*.

Epidemic Influenza and its Treatment.

C. J. ROBINSON.

La grippe came, and came to stay through the inclement season of the year. Well, what is *la grippe?* In this country it is an acute catarrhal affection of the mucous coats of the mouth, throat and stomach, involving all the mucous membranes in the body. The inflamed abnormal condition of the secreting membranes causes constitutional disorder, more or less severe and varied in different persons: that is, the symptoms are not just alike in any two or more who suffer from an attack.

In the Winter of 1889 the writer was ill with *la grippe* several weeks. Again in the Winter of 1890, toward Spring, *la grippe* seized me in its fulminant form, laid me so low that vitality was at a low ebb, reducing my six-foot avoirdupois from 176 to 134 pounds—a difference of 42 pounds on a lean subject.

My family physician visited me, but I treated my ailment to suit my individual notions. At one time the Doctor intimated by his sad look and no cheering word that it was going hard with me, so I braced up against the crisis, thus I gained the case.

Whenever any persons have the disease so that when cold water is taken into the mouth it produces an undescribable torture (vitiated taste), they are hard in the toils of the disease. The fact that cold water produces such a harmful effect on the diseased membranes, and that hot drinks are relished, though the taste be vitiated, is conclusive evidence that warmth (heat) is a proper antidote in the treatment of *la grippe*, and that cold is a deadly bane.

The disease yields in most cases to simple treatment, heat being one of the prime factors in assisting nature in its efforts to resume healthy action.

Now, what should be the medical treatment? Well, *la grippe* being a catarrh, the secreting membranes need special attention. The one drug that comes nearest to being a specific for diseased mucus surfaces and tissues is Golden Seal, *Hydrastis Canadensis*, which is a powerful tonic, exerting an especial influence upon the mucous membranes and secreting tissues.

In my terrible racket with *la grippe* I took fluid extract of Golden Seal, 20 to 30 drops, of standard strength, as per U. S. Pharmacopœia, taking at discretion as to intervals of time and quantity. I am certain that in my case it was Golden Seal that counteracted and after a time cured the malignant catarrhal affection.

As a prophylatic (to prevent attacks of disease), Golden Seal is the "eureka" in cases of any irritation of the mucous membrane. Those who fear attacks of *la grippe* may probably avoid suffering therefrom by a timely use of extract of Golden Seal, in doses of from 10 to 3 drops (best in hot honey), on rising in the morning, and on retiring to rest at night.

If *la grippe* catches on, then, in addition to Golden Seal, quinine not only helps the vital forces, but it neutralizes the malarial poison which is ever present in about all cases.

To quiet the nervous agony produced by *la grippe*, bromides chloral and morphine have been resorted to, but the remedy lately discovered and tested —Antikamina—proves itself more than the equal of the other sedatives, producing alone the desired happy effects, without interfering with the action of the heart, as the others are liable to do, and in some cases seriously effect that organ.

Richford, N. Y.

Importation of Bees.

G. W. DEMAREE.

There has been a marked disposition on the part of a number of apicultural writers to oppose all importation of bees. There certainly can be no good reasons given for such unprogressive ideas.

It may be well enough to say that there is no further use of importing the Italian and Carniolan races that have been improved and made better by having been carefully bred from selected specimens under the superior skill and patience of American apiarists until our selected American bees are superior to any bees in Italy. A little good sense and judgement is as useful, along this line, as in any other department of business. The man who would not engage in importing Italian queens and breeding from them because he imagined that imported stock was no improvement, would be thought badly behind the times.

But progressive apiarists will continue to import *new* races of bees and give them a fair trial, as long as there are new races brought to light in the darkest corners of the earth.

When Italian bees were first imported to this country it was an experiment pure and simple, and they were denounced as "humbugs" by many people without knowing anything practically concerning them. The first of these bees I ever saw were about fourth-class hybrids and cost $25 per colony. I then and there set down Italian bees as an unmitigated "humbug." But after that I met with the race in its best estate, and I changed my mind toward them sufficiently to give $10 for a queen and a handful of bees, which I built up into a strong colony, and thence commenced my career as a *modern* bee-keeper.

At that time, and for years afterward, the Italian was believed to be a pure race of bees, and at the start I shared in this common belief. But, being a close observer of all matters pertaining to bees, I soon discovered that, when breeding from imported queens, I could find none that did not "sport" in a way that convinced me that the Italian bee was a hybrid, and I was the first American writer who disclosed the fact to the public, as a review of the old files of the AMERICAN BEE JOURNAL will show.

I was opposed in my views by many at the time, and supported by none. But it was noticeable that the "three-band test" followed rapidly on the heels of my announcement. Now no reputable writer would venture to speak of the Italian as pure race of bees.

In those days I owned one imported *mother* that "sported" in her offspring —worker, drone and royal progeny—in a fashion that opened up a new field of study to me. I discovered specimens among the worker progeny that were *pure yellow* bees, minus any stripes, bands or dark veins, and other specimens as black as night, with broad, short abdomen—the very picture of what I have since seen in the new "Punic" race. I inferred from those out-cropping specimens that the Italian was a cross, of long standing, between a pure "yellow" and a pure "black" race of bees, and my convictions were published in the AMERICAN BEE JOURNAL.

Some smart persons tried to make fun at my expense at the time, but now the pure "black" race of bees in the new Punic (*Apis niger*) has been brought to light "black as jet," and are actually now on trial in hundreds of apiaries in this country.

I have never lost faith in the forthcoming "pure yellow bees." They are going to be discovered, and the man who first procures them will need no machinery to "boom" them. The pure yellow bee will be taken without the asking.

There are more chances in favor of importing new races of bees than most people are aware of. Before the yellow races of bees were brought into Kentucky, no person had ever seen a honey-bee working on the red-clover. Its luxurious growth in the blue-grass belt put the blossoms beyond the reach of the native black bees. The Italians, however, visited the blossoms of the first as well as the second crop of bloom every season.

The Italians also work on the iron-weed bloom, which is never visited by the native black bees. There are possibilities connected with the newly-introduced Punic bees that cannot be known until these bees are tested.

Why may not these "little bees" find their way into flowers loaded with nectar that are inaccessible to the larger races?

On this account the trial of the new races is a matter of much interest to me.

About the Carniolan bees much wild fuss has been made. The idea has taken hold that the Carniolan must be a *pure race.* In my opinion nothing is further from the facts. I procured an imported queen directly from Mr. Benton, two years ago, and though her worker progeny were uniformly dark, only some of the aged workers showing slight splotches of rust color, not yellow, on the first segment of the abdomen, when I came to breed from her the young queens were far from uniform in color.

Among the first brood of young queens reared, there was one nearly as yellow as the queens of my light-colored Italians; and, when she was mated, her workers were just like well-marked Italians. One of the features noticeable in these bees is the fact that they never deteriorate, in breeding, like other bees.

Of the number of colonies of these bees that I have handled, not one of them has *slid back* into colonies of dingy hybrids, so commonly met with in nearly all Italian apiaries.

I gave two Carniolan queens to a friend of mine, who lives in a black-bee region, and he has reared queens from them, and he says that they hold their grip of yellow blood, against the black bees, much stronger than do the best types of the Italian race. This would be beyond belief to me, if I had not seen it for myself.

Introduce some Italian queens in an apiary of black bees, and leave them to fight their own battle for color, and the result has no uncertainty about it. The black blood will predominate over the yellow till but a trace of the yellow will be visible.

But when once the Carniolan becomes yellow in color, no fnfluence seems to force them down.

But to deal fairly with them, and all other races of bees, I have found the Carniolan bees, especially in their Austrian dark dress, more inclined to swarm, and harder to manage when they swarm, than most races of bees that I have handled. But as they become American-bred this undesirable feature in their make-up disappears, in a measure at least.

The little nigger Punics may be no good when thoroughly tested, but now they stand before the judgment bar of unprejudiced apiarists untried. They exhibit peculiarities not seen in any other bees heretofore introduced into this country.

Their small size, solid color in a state of purity, and their quick movements (quick as a flash), are points that must interest any close observer, while he watches the outcome of the little black strangers.

I have made it a point to test for myself all new races of bees. It has cost me some money to do it, but the interest I have felt in the enterprise, and the pleasures I have derived from the experimentation, have been ample compensation. I now have a Punic queen, and anticipate much pleasure in testing her workers next season.—*Apiculturist.*

Small Comb for Nuclei.

E. L. PRATT.

I will use Mr. S. F. Trego's words as near as possible in answer to his article on page 589, giving my views and experience on the above subject. Please compare :

I want to say that small nuclei are *not* a nuisance. In 1891 I used over 300 of the Pratt style, and, if I remember right, I got 88 per cent. of mated Punic and Carniolan queens from these small hives.

If Mr. Trego will read my book carefully he will see how to care for small nuclei, so that it will not require "half a day trying to keep them from absconding." If properly managed there will be no "swarming out" of any account.

I feed my bees a *generous* amount of sugar syrup as often as they need it, and I am not troubled with the tricks Mr. T. mentions—following the queen when she flew out to mate—absconding a few hours after I had shipped their queen—absconding if I did not take the queen out before she had all the combs full—and I never fail to get them to accept a vigin queen, either young old. I can remove three mated queens per month from a small hive in good weather.

Robbing is a bad thing to have started in a yard containing small nuclei, and unless one is experienced in managing them, robbing will surely start, and that was Mr. T.'s whole trouble, without doubt.

I shall not remodel the bodies of my small hives for feeders, or anything of the kind, but shall continue to use them with excellent success, as I have done for the past three years.

If I was obliged to use a four-frame Langstroth hive for mating queens, I would quit the business. In the first place, they are unfit for out-yards, one taking up more room than six of my small hives. It would require a ten-acre lot to work them in. Each hive would require enough bees to stock 8 or 10 of the small hives. I can rear *more* queens from a certain number of small hives, with *less work*, *less expense*, *less time*, *less bother*, *and less loss*. When Fall comes double them up—*they are worth uniting.*

It is a waste of bees, time, and money to use 4-frame Langstroth nuclei for mating queens. A four-frame Langstroth nuclei is worth more as a full colony, and I would advise Mr. Trego to give his attention to full colonies for honey rather than ruin his colonies by smashing them into expensive four-frame hives for mating queens. There would be more money in it for me.

As a queen-mater for profit, Mr. T. seems to be a total failure. There are many queen-breeders now using my method of nuclei management, and they do not have Mr. T.'s trouble when correctly managed.

Last season I worked 100 small hives with but two combs each, 4¼x4¼ inches, and half a pint of bees each to start with. Out of the 100 nuclei thus arrayed I took 98 mated queens on one mailing trip. I shall work them all in this manner next season, and I believe I can mate my queens at even *less* expense than I did last season.

Beverly, Mass.

Bee-House Above Ground.

C. LOWER.

In further answer to the question on page 652, I will say that I built a bee-house one year ago 8x8 feet, and 7 feet high. The studding, 2x4 inches, was turned sidewise, sheathed with 1-inch pine lumber, papered on the outside with building paper, and then sided with ½-inch lumber. The flooring and ceiling overhead was unmatched inch-boards, and I covered both the floor and ceiling with oat-straw and chaff, about 6 inches deep.

I hung a door made of inch-boards in one end, 2½x6½ feet; put a small door in the gable end, and covered the building with common sheathing and shingles. This finished the building, which I set on four stone pillars, one foot from the ground, with no underpinning.

The bees were prepared for Winter-quarters thus: The hives are 1½-story, with cloth over the brood-frames, which I turned back about two inches, at the back part of the hive, and cut a piece of wire-screening large enough to cover the opening, and then filled up the hives with oat-straw and chaff, so full that the cover would not go down by one inch, and then put them in the above described house. My 13 colonies remained there until Spring, and all came out in fine condition except one colony, which died with the diarrhea. Twice during the Winter the thermometer indicated 16 degrees below zero in the building. The idea of having to keep bees in a room that is 8 or 10 degrees above the freezing point is "all moonshine."

The main point in Wintering bees is to keep them *quiet* and *dry*.

Decorah, Iowa.

[Surely Mr. Lower has made a mistake in writing the above. He cannot mean 16 degrees below zero—that would be 48 degrees below the freezing point! For the temperature in a bee-house, even for a short time, that would be preposterous! Did he not mean to say 16 degrees below the freezing point?]

How I Have Wintered My Bees.

ALBERTUS BAILEY.

About ten years ago I built a house for Wintering my bees, and it has paid me as well as any investment connected with the bee business. Not only has it proved profitable as a building for Wintering, but I have use for it in the Summer for storing honey, and doing work in connected with the apiary. Four years ago I built another, so now I use one for storing honey, and the other for extracting and storing the honey-racks when removing surplus honey.

The building (outside measure) is 12x20 feet, and is built on a foundation high enough to protect the sills, and thick enough to prevent frost from entering. The sills are 2x8 inches.

Beginning from the outside: First, cove-ceiling nailed to 8-inch studs. Inside it is ceiled with 1-inch hemlock; 2x4 scantling are used overhead on which to nail the ceiling. This leaves a space of 8 inches to be filled with sawdust on the sides, and I put about 12 inches of sawdust overhead.

I have a ventilator within about 4 feet of the ends overhead; a sub-earth ventilator extending 25 feet, and entering at the center of the building.

The bottom is covered with cement; this will keep the mice at a distance, and will be dry at all times.

A building of this size will take care of from 100 to 125 colonies of bees. One end has two windows, the other has double doors—one opening inward, the other opening outward.

Wire-cloth, with a tube about 3 feet long, should be arranged on the outside of the windows, so that the bees can escape while removing the sections. Two men with a carrier, will, in half a day, take in 200 colonies of bees. A screen-door will also be of much service during the Summer months.

Cardiff, N. Y.

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A Wonderful Proposition.

M. M. BALDRIDGE.

On page 728 of the American Bee Journal, Mr. B. Walker says he "will pay 25 cents for first-grade white clover honey, graded by rules adopted at the Northwestern Convention."

I have given Mr. W.'s proposition *verbatim*, and now will call the reader's special attention to the fact that Mr. W. does not say he will pay 25 cents per pound for such honey, nor does he state the number of pounds he will take at that price. He might have done so, however, in safety to himself, as he very well knows there is very little, if any, white clover honey this year, of any of the three grades described on page 710 of the American Bee Journal. If Mr. W. will state the number of pounds of white or light honey, of the first grade, at 25 cents per pound, he will take, I think he can be supplied to his heart's content.

In view of what has now been said in the foregoing, I think Mr. W. must have some unexplained motive in making his indefinite proposition, and I trust he will try to explain himself to the readers of the American Bee Journal. From my standpoint it looks as though he must be dissatisfied with the instructions for grading comb-honey, as adopted by the Northwestern Convention, and takes this course to make known his dissatisfaction. Now, it seems to me that a better and more satisfactory course to pursue would be to take up the points in each grade separately, and analytically, and, by so doing, point out the injustice of grading comb-honey by the instructions adopted by the Northwestern Convention. Here is the golden opportunity for him to let his light shine, and to give to the readers of the American Bee Journal some valuable information.

St. Charles, Ill., Dec. 4, 1891.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Dec. 15.—Huron, Tuscola and Sanilac, at Sebewaing, Mich.
Jno. G. Kundinger, Sec., Kilmanagh, Mich.

Dec. 16, 17—Illinois State, at Springfield.
Jas. A. Stone, Sec., Bradfordton, Ills.

Dec. 31.—Michigan State, at Grand Rapids.
Geo. E. Hilton, Sec., Fremont, Mich.

1892.
Jan. 6, 7.—California State, at Los Angeles.
C. W. Brodbeck, Sec., Los Angeles, Calif.

Jan. 18, 19.—Colorado State, at Denver.
H. Knight, Sec., Littleton, Colo.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

North American Bee-Keepers' Association

President—P. H. Elwood....Starkville, N. Y
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y and Manager—T. G. Newman, Chicago.

Bee and Honey Gossip.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Apiary Nearly Ruined by a Flood.

The time has again rolled around to pay for the American Bee Journal. I gladly pay my mite for such a valued friend and advisor, for I certainly could do nothing without it. I have learned all I know about bees from it, and experience, as I have no bee-keeping neighbors to consult. I often think of what a pleasure it must be to attend conventions, and talk about bees.

My bees have done fairly well this year, considering the chance they have had. Our neighborhood was so unfortunate as to be overflowed, the levee having broken about a mile above us, on the morning of March 21, just after I had put on the surplus cases, and got everything in good trim for a good crop, as I had reason to hope for, all my 24 colonies being in first-class condition. When the water came, everything went hurry-scurry. As I am employed as manager of a plantation, of course I had to look after my employer's affairs, and as everybody was afraid to touch the bees, I lost all but ten colonies. These I picked up next day, and placed them on the top of out-houses. They were very weak, a great many having drowned. They built up very fast, and, after all, I extracted about 600 pounds of honey.

ALBERT VOUGHT.

Illaware, La., Nov. 25, 1891.

Bee Scouts.

On page 585, in answer to Query 791, G. W. Demaree is opposed to the idea of bees sending out *scouts*. On page 658 (Nov. 19, 1891), G. Poindexter takes the opposite view, and if he has seen the bees clean out those hives in apple trees, and can make it appear that they afterward went in those places as a swarm, it surely is evidence—but what evidence is there that *swarms* sent out scouts?

Shiloh, O. T. F. KINSELL.

Bees Wintering on Summer Stands.

My 8 colonies of bees came out all right last Spring, and I had a good crop of honey. I got 900 pounds from 8 colonies, Spring count; 75 pounds of that being comb-honey, and the rest of it was extracted. I have now 14 colonies in good condition for Winter. We have already had some very cold days, but now it is pleasant again. I winter my bees in chaff-hives, on the summer stands. I have been successful with it for three years. R. TOLEBROTEN.

Barber, Wis., Nov. 22, 1891.

Report of a Beginner.

I wish to tell the readers of the BEE JOURNAL what I have done with 9 colonies of bees which I purchased in October, 1890. They wintered well, and I commenced to feed them with sugar syrup in April to stimulate breeding. I now have in the cellar 18 colonies in good condition, except that some of them are light in stores. I use 8-frame Langstroth portico hives, and think that I like them better than any others that I have seen. I got my best, and in fact nearly all my surplus honey from sweet corn. The weather being very cold and windy, we did not get much honey here—4 colonies giving me only 100 pounds of comb-honey. The other 4 gave no surplus. This being my first experience, I hope to do better next year. In the Spring I will let you know how my bees have wintered. I should like to hear from more of the beginners in bee-culture, as I like to compare notes with them. I do not know what I should have done without the AMERICAN BEE JOURNAL, for it helped me over many a hard place. L. COSHMAN.

Sioux Falls, S. Dak.

Bees Did Well.

My bees did well this year, especially the latter part of the season. It was nearly the first of July before the weather was dry enough for them to work much. R. T. REYNOLDS.

Denison, Kans.

Constantly Read and Appreciated.

Cold Winter is about here. Our industrious little friends must now stay packed up close in their home for three or four months. Cold weather and rain cut off a part of our best honey-flow. Bees could not do much work on the asters for 2 or 3 weeks at a time, otherwise we would have secured a much larger amount of surplus honey. Taking all in all, our little pets have done well for us this Summer, and have laid up stores in plenty to last them until beautiful Spring bids them come out and work for another eight months. I am well pleased with the BEE JOURNAL. Its weekly visits to our home is appreciated, and its pages are read with much interest. Your way of giving every reasonable person a fair hearing is manly and honest, and is, or should be, appreciated by every lover of truth. JOHN D. A. FISHER.

Woodside, N. C., Nov. 28, 1891.

Young Bee-Keeper's Report.

I commenced the last season with 4 colonies, increased them to 10, and took from them about 375 pounds of honey, mostly extracted. I have now put 2 of the smallest colonies together, leaving me 9 at the present time. The cause of the 2 colonies being in poor condition was queenlessness. One in particular acted differently than any I ever heard of. I gave them brood and eggs at three different times during a good Fall flow of honey, but they failed to rear a queen.

Can any one tell me what was the cause of this? I started in the Spring of 1889 (at the age of 19) with one colony, never having seen the inside of a hive; nor, till the present time, have I seen any apiary of frame hives but my own. Now I have fixtures and an extracting house that cost about $75, and my bees have paid for it all, besides I now have 8 good colonies more than I started with. We have not had any white clover honey in this locality for the past three years, although it blooms abundantly, so it should produce our chief supply of honey. I should think my crop of would be doubled.

Trenton, N. J. JOSEPH EHRET.

Less Honey than in 1890.

My bees gathered but very little surplus honey last Summer—only a little over 300 pounds—and that is much worse than the season of 1890, when my crop was something over 2,000 pounds of as nice honey as I ever saw. It was white clover and basswood, for I had no Fall honey last year. This year there seemed to be more white clover bloom than common, and my bees worked hard on basswood for about one week, but they got no honey from it. I had 70 colonies, Spring count, and they gave 3 prime swarms, and one after-swarm, which I returned.

WM. H. GRAVES.

New Carlisle, Ind., Nov. 17, 1891.

Good Honey Crop.

The bees have done fairly well in this locality this year. Although the season was not favorable, yet my bees have gathered 40 pounds of surplus honey per colony, Spring count. I had 40 colonies in the Spring, in good condition, which increased to 57. I had about 40 swarms, but many were returned. The bees are now in Winter quarters, contenting themselves with their stored sweets. AARON NYHUISE.

Chandler, Ind., Nov. 21, 1891.

Bee-Hunting.

I have on hand 14 colonies of bees. I "hunt" bees in the Fall. I found 16 colonies, and the blacker the bees the more honey they had. I had mostly comb. My colonies are Italians. Will some one interested in Italian bees please explain why the blacks were ahead in stores? About half I found were Italians. I notice that some object to hunting bees with a smoker. I have used it on 25 swarms this Summer with success, losing only one swarm. I have united all the after swarms, reducing the number to those I now have. I take the BEE JOURNAL and think it very interesting. HOMER SCOTT.

New Hudson, Mich., Nov. 25, 1891

Large Increase.

My report for the two years I have kept bees is: I bought 5 colonies in the Spring of 1890. They increased to 9, and gave me 285 pounds of honey in 1-pound sections. In February, 1891, I moved about 10 miles, and on account of bad weather, and my having *la grippe*, I lost all but 4 colonies. I have now increased these by natural swarming to 10 colonies, all in fine condition for the Winter, and I have 200 pounds of honey in 1-pound sections. This has been a poor season for honey, but it has been a great one for increase. Some having increased five-fold. I look for a hard Winter, and fear great loss will result where bees are weak in numbers, and have not plenty of stores.

A. D. AVERITT.

Stanberry, Mo., Nov. 23, 1891.

Good Crop of Honey.

I have learned a good deal about taking care of bees from reading the BEE JOURNAL, and I am satisfied. I put 25 colonies in the cellar last year, 2 starved, and I lost 2 in the Spring. I sold 2, leaving 18 to start with last Spring, and I got some over 900 pounds of comb-honey as nice as I ever saw. I now have 40 to put in the cellar in good condition. My bees swarmed late; I had one swarm as late as July 15; it was a double swarm—2 came out together, and I could not separate them. They gave me 40½ pounds of nice honey, and they now have plenty for Winter. Who says that a "swarm in July is not worth a fly?" IRA J. WOOD.

Vernon Centre, N. Y.

Household Friend.

The AMERICAN BEE JOURNAL arrives regularly every Friday, and I am so well pleased with it that I think I could hardly do without it.

FRANK ARNOLD.

Deer Plain, Ills.

Wavelets of News.

Honey-Dew as Winter Stores.

The fifth annual Illinois State Convention of the Young People's Society of Christian Endeavor met in this city last week, and one thousand and forty-three delegates registered from abroad. Many others, taking advantage of the cheap rates, visited this city; among them Geo. Poindexter, of Kenney, Ill., who has an apiary of 140 colonies.

He said that he took a pointer of how bees would Winter upon honey-dew from this circumstance: He took three queen bees to the State Fair, two of them caged upon a section of honey-dew, and one of them upon last year's honey. When he had returned home he found that the bees and queens caged upon the honey-dew were all dead, while the one upon last year's honey was lively. He thought that there might not have been sufficient ventilation, and this made him think that colonies would require abundant ventilation this Winter on account of their stores.—MRS. L. HARRISON, in the *Prairie Farmer.*

Brown's Queer Bee-Tree.

Joseph Brown, who works in the lumber woods near Galeton, Pa., came into town and got William Squires to go with him to Bald Hill to help him gather the stores from a bee-tree he said he had discovered on his way in from the woods.

"I heard the bees buzzing in the tree while I was five rods away from it," Brown said, "or I wouldn't have discovered it."

The men took with them 3 patent pails to hold the honey, an ax to cut the tree down, and a lot of sulphur to burn in the hollow, for the purpose of smoothering the bees. Brown led the way to the tree, but they could not hear the humming. The tree was hit with the ax and the humming struck up immediately, and so loud as to startle the young men. They found near the bottom of the trunk a hole where the occupants of the tree had made their entrance, and the sulphur fire was started there, and its stifling fumes went up into the hollow tree. For a time the buzzing inside was terrific, but gradually grew fainter and fainter as the sulphur had its deadly effect, and finally ceased entirely.

"Now we'll cut her down and gobble that stock of honey," said Brown.

The tree was chopped down, and when it fell and displayed its hollow interior, the two bee hunters were not only surprised but disgusted. Instead of layers of rich honey they were greeted by the sight of a tangled mass of rattlesnakes, which had been suffocated by the sulphur fumes. The snakes had chosen the hollow tree for their Winter home. There were fifty-eight large rattlers and eight blacksnakes, a puff adder and three copperheads in the collection. The noise Brown had thought was the buzzing of wild bees was made by the rattling of rattlesnakes in chorus as he was passing. Brown and Squires will get about two gallons of oil out of the rattlesnakes, which will net them at least $100, so their queer bee-tree will pan out a good day's work after all.—*New York Sun.*

Mineral Wax.

At the mouth of Nehalem River, on the coast of Oregon, a very queer substance is found. It has the appearance of a mineral at first sight, but on close inspection, and under practical test, it appears to be beeswax. It has all the useful properties of beeswax, and it is sold in Astoria at the regular market price of the beeswax. It is washed ashore at high tide in quantities ranging from a lump the size of a walnut to a chunk weighing 150 pounds. It is also found on shore, in black soil where trees are growing, at considerable elevations above the water.

A piece of this strange substance has just been submitted to expert examination in New York, and is declared to be what is known as mineral wax. This substance has for years been known to exist in the lignite beds of the Northwest. The quantities found on the Oregon coast would seem to indicate the existence of a tertiary lignite bed in the neighborhood. It belongs to the hydrocarbon series allied to the retinites and ambers—fossil remains of resinous trees of the tertiary age.—*Pittsburg Dispatch.*

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Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

HONEY AND BEESWAX MARKET.

NEW YORK, Dec. 4.—Demand is limited, and supply sufficient. We quote: Comb—Fancy white, 1-lb., 14@15c; 2-lb., 12c; off grades, 1-lb., 12@13c; 2-lb., 10@11c; buckwheat, 1-lb., 10@11c; 2-lb., 9c. Extracted—Basswood, white clover and California, 6¾@7c; orange bloom, 7@7½c; Southern, 65@70c ℔ gal. Beeswax, 26@27c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, Dec. 5.—The demand and supply are fair. We quote: White comb, 1lb., 15@16c; dark, 10@12c. Extracted—White, 7c; dark, 5@6c. Beeswax, is in light supply, and demand good, at 23@26c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Dec. 5.—The demand is slow, with good supply, except choice comb. We quote: Choice white comb, 14@16c. Extracted, 5@8c. Beeswax is in good supply and fair demand, at 23@25c for good to choice yellow.
C. F. MUTH & SON,
Cor. Freeman & Central Aves.

NEW YORK, Dec. 4.—Demand for honey is fair, with adequate supply; buckwheat not so plentiful as clover. We quote: Fancy clover, 14@15c; fair, 1℔., 12@13c; buckwheat, 10c. Extracted, 7@7¼c. Beeswax, in fair demand, with adequate supply, at 25@27c.
CHAS. ISRAEL & BROS., 110 Hudson St.

CHICAGO, Dec. 5.—The demand is good for fancy white comb-honey, in 1-℔. sections, at 16c; other grades white, 14@15c. Extracted honey selling slowly, owing to warm weather We quote it at 6½@7½c. Beeswax, in light supply and good demand, at 26@27c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Dec. 5.—Demand is good, with comb in fair and extracted in light supply. We quote: Comb—1-lb. fancy, 15@16c; dark, 12c. Extracted—White, 7@7½c; dark, 5@6c. Beeswax—None in market.
HAMBLIN & BEARSS, 514 Walnut St.

DETROIT, Dec. 4.—The demand for comb-honey is fair and supply moderate. We quote: Comb, 12@13c; extracted, 7@8c. Beeswax in good supply, and light demand, at 25@26c.
M. H. HUNT, Bell Branch, Mich.

CHICAGO, Dec. 4.—Demand is good and supply small of gilt-edged stock. We quote: Choice white comb, 14@16c. Extracted, 6@8c. Beeswax, in light supply, and good demand, at 26@27c. J. A. LAMON, 44-46 S. Water St.

MILWAUKEE, Dec. 2.—Demand fair and supply good, except of the best quality. We quote: Comb—choice, 1-lb., 15@16c; fair, 13@14c; dark, 10@12c. Extracted—white, in barrels or kegs, 7½@8c; dark, 6@6½c. Beeswax, 23@28c.
A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO, Dec. 1.—Demand good, supply small. We quote: Comb, 1-lb., 10@13c. Extracted, 5½@6½c. Beeswax, in light supply and good demand, at 23@24c.
SCHACHT, LEMCKE & STEINER,
16 Drumm Street.

NEW YORK, Dec. 4.—Demand moderate, and supply reduced, with no more glassed 1-℔ nor paper cartons, 1-℔. We quote: Comb, 1-℔, 14@15c. Extracted—Basswood, 7¼@7½c; buckwheat, 5½@6¼; Mangrove, 68@75c per gal. Good demand for dark extracted honey. Beeswax, in fair supply, with small demand, at 26@27c.
F. G. STROHMEYER & CO., 122 Water St.

CHICAGO, Dec. 5.—Demand is now good, supply is not heavy. We quote: Comb, best grades, 15@16c. Extracted, 6@8c. Beeswax, 26@27c. R. A. BURNETT, 161 S. Water St.

BOSTON, Dec. 4.—Demand is good, supply ample. We quote: 1-℔. fancy white comb, 15@16c; extracted, 7@9c. Beeswax, none in market.
BLAKE & RIPLEY, 57 Chatham St.

ALBANY, N. Y., Dec. 4.—Demand is good, and supply liberal. We quote: White comb, 14@16c. Extracted—White, 7½@8½c; dark, 6@6½c. Beeswax, supply light, and demand good at 28@30c.
H. R. WRIGHT, 326-328 Broadway.

NEW YORK, Dec. 4.—Demand is fair, and supply ample, except buckwheat comb. We quote: Fancy white comb, 14@15c; buckwheat, 10@11c. Extracted—Clover and basswood in good demand at 6@8c; buckwheat in demand at 5½@6½c. Beeswax in fair demand at 26@28c.
F. I. SAGE & SON, 183 Reade St.

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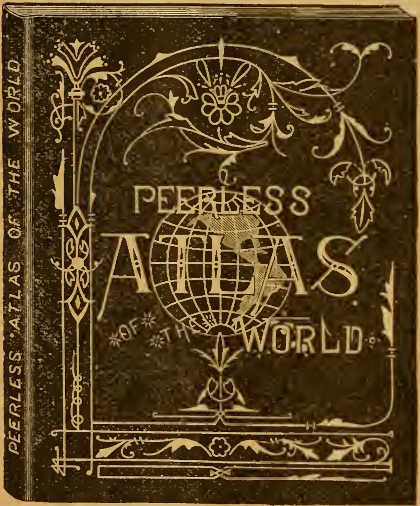

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THOMAS G. NEWMAN,
EDITOR.

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Editorial Buzzings.

A Full Index will be given next week, and that will show what a diversity of subjects has been discussed during the past six months—for we now give an Index every half year. Those who wish to bind the Bee Journal every six months can do so, and those desiring to have volumes bound yearly can do that—under the new arrangement, with the increased number of pages and new form.

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We Have Decided not to publish any of the Official Report of the North American Convention until the first issue in the New Year. The only intervening number is next week's, and that ends the volume. It would be better to have the Official Report all in the same volume, and so we hope to give at least a part of it in the Bee Journal for January 1, 1892.

Mrs. L. Harrison writes as follows to the *Prairie Farmer* about the late Convention in Chicago:

> Notwithstanding the poor returns derived from bee-culture for several years, eight States of the Northwest and Florida were represented. Much time was spent in discussing subjects appertaining to bee-keepers at large, and the talk was not confined to the routine of the apiary. A number of practical bee-keeping women were present.
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> There were hives, sections, a section-folder, crates, queen-cell protectors, bee escapes, etc., on hand for inspection; also some white honey, gathered in Michigan from the willow herb.

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The Daughters of the American Revolution have been granted 3,000 square feet for an exhibit in the Woman's Building of the World's Fair. The organization, of which Mrs. B. Harrison is president, has 1,000 members.

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The North American Convention has now passed into history. What it has done, is done, and will be approved, discussed or censured, as the case may warrant. We are sorry to learn that Dr. A. B. Mason was unable to be present. An excellent body of officers were elected, consisting of the following:

President—Eugene Secor, Forest City, Iowa.

Vice-President—Capt. J. E. Hetherington, Cherry Valley, N. Y.

Secretary—W. Z. Hutchinson, Flint, Mich.

Treasurer—E. R. Root, Medina, O.

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Mexico has made a World's Fair appropriation of $50,000. This is only preliminary, however, and it is fully expected that the whole of the $75,000, which were asked for, and perhaps more, will be voted.

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Next Year the "North American" Convention is to be held at Washington, D. C. This will be the first time that it has held a meeting at the Capital.

Last Week we mentioned, on page 749, the fact that the London *Journal of Horticulture* had apologized for the libelous article it had published, written by "Hallamshire Bee-Keeper," and that the lawsuit had been withdrawn. Here is its apology in full:

> We have received notice that the article which appeared on page 211 of the *Journal of Horticulture* for September 3, 1891, under the heading of "Punic Bees, and Those who Know Nothing About Them," and signed a "Hallamshire Bee-Keeper," charges the editors of the *British Bee Journal and Record*, Messrs. Cowan and Carr, while purporting, in answer to an inquiry, to give all the information in their power about the so-called Punic bees, that they deliberately suppressed facts within their knowledge, and thus gave a false account of matters of interest to the readers of their journal. That the article also insinuates that Messrs. Cowan and Carr have some personal and unworthy motive for concealing facts which it is plainly stated they must have known.
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> There was no mention of Punic bees in the *Record* of June, 1890, nor has there been any allusion to them either editorially or by any of its correspondents. There is also no statement in the *Record* for June, 1890, that Mr. Carr had a Punic stock in his possession, and he has never written anything about Punic bees.
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> It is suggested that the appearance of the article in question might be due to an oversight, and not to any intention to injure any one. That is certainly the case, for it is far from our desire to make reflections on the reputation of those for whom we have never entertained feelings other than those of true respect, and we now desire to express our regret that the article referred to appeared, and to withdraw all the charges and insinuations therein contained.

If You Have any honey to sell, get some Honey Almanacs and scatter in your locality. They will sell it all in a very short time. We have a few Almanacs for 1891, which we are selling at half price.

☞ If those who are in arrears will pay up during December, and add a dollar for 1892, we will present each one with a copy of "Rural Life", or the Convention Hand-Book (see pages 792 and 800), as they may select.

The Honey Almanac for 1892 will be published this week, and all orders for it will be filled by the time this JOURNAL is in the hands of its readers. Honey producers should scatter these Almanacs liberally, not only to pay for getting them up, but to inform the public generally about the uses of honey, and the benefit to the physical system by its generous consumption.

A Biographical sketch of Prof. A. J. Cook is given in the *American Agriculturist* for December, accompanied with a half-tone engraving. We notice in it this well-deserved compliment:

> Prof. Cook's special field of science is well know to all, for, as an entomologist, he has achieved remarkable success. While not unmindful of the value of "truth for truth's sake," he finds his greatest pleasure in working along many extremely practical lines in economic entomology.
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> As a teacher, Prof. Cook has seen his department in the college grow from practically nothing—for he created it—to one of the best equipped laboratories and museums in entomology in this country, and it has become a center in the Western States, where young men gather for advanced work. His former pupils fill many responsible positions in the colleges and experiment stations in this country.

An Ideal Bee Funeral(?)—An exchange gives a fanciful description of a bee funeral. Bees are not usually credited with sympathy or sentimentalism, but the writer of this item evidently thinks they should possess such traits if they do not. He says:

> Two bees were observed to issue from a hive, bearing between them the body of a comrade, with which they flew for a distance of ten yards. Then, with great care, they put it down, and selected a convenient hole at the side of the gravel walk, to which they tenderly committed the body, head downwards, and then afterwards pushed against it two little stones, doubtless in memoriam. Their task being ended, they paused about a minute, perhaps to drop over the grave of their friend a sympathizing tear, and then they flew away.

The Report of the National Bee-Keepers' Union for the past year is as follows:

The past year has been a very important one for the National Bee-Keepers' Union. We have added 50 per cent to our membership, and rendered timely and substantial aid to many bee-keepers who were harrassed by malicious and designing enemies of the pursuit.

The moral weight and influence of the Bee-Keepers' Union has prevented many lawsuits from being commenced, and where such had been begun it overthrew the claims of ignorant enemies of the pursuit, foiled the machinations of cunning lawyers, and guided the judges in making decisions, by referring them to the decision of the Supreme Court of Arkansas, and the able argument of Judge Williams in the celebrated case of the City of Arkadelphia *vs.* Z. A. Clark.

In briefly reviewing the work of the past year, we commence with the case of

G. W. Cole, Canton, Ill.

Here complaints were made to the Mayor, and the bees of Mr. Cole were declared a nuisance. Ignorant jealousy was the cause of the trouble. The case was then brought before a Justice of the Peace, who decided it against Mr. Cole (as might be expected), fining him $1, and costs of $21.70. The case was then taken up by the Union, and appealed to the Circuit Court.

The prosecuting witness, Mr. Shaffer, not being content to await the result of the appeal, maliciously renewed the attack, and the same Justice of the Peace issued a new warrant, just to annoy Mr. Cole. But this time the Union *won the case.*

It was shown that concentrated venom was the cause of the prosecution. The city papers condemned the Mayor and Council in unmeasured terms.

At the Circuit Court, to which the case was appealed, Mr. Shaffer and his minions were defiant and threatening at first, then they wanted to hedge. When the case was reached on the docket, our attorneys called the attention of the Court to the statute, and cited authorities. The Judge said that such a case could not be maintained, and ordered it dismissed.

Thus ended the celebrated bee case at Canton. We had hoped to have the opportunity to carry this case to the Supreme Court, but was not allowed to do so. It was clean-cut maliciousness, and would have been a grand chance to have the decision of the Supreme Court of Illinois on the simple question, "Is bee-keeping a nuisance?"

Mrs. J. M. Null, Miami, Mo.

The Mayor, who is also editor of the *News*, tried to incite a crusade against the bees, and assailed Mrs. Null and her honey-gatherers each week. That lady, having been a member of the Union for years, was instructed how to proceed should legal measures be commenced by that ungallant official, and copies of the Arkansas Supreme Court decision were sent to the Mayor and Councilmen. They have not dared to molest the bees yet.

F. M. Hart, Traver, Calif.

A fellow named Ogden, who is a grape-grower in Traver, circulated a petition to the Board of Supervisors to have the bees removed because they were charged with ruining the grape crop—that damage was done by rain, however. Mr. Hart wrote the facts to the Manager of the Union, who, last February, instructed him how to proceed, and sent copies of the Arkansas Supreme Court decision, to be placed in the hands of the Board, and head off the petitioners.

The Board then procured from the District Attorney an "opinion" on this question: "Can the Board of Supervisors prohibit, by ordinance, the keeping of bees?"

The District Attorney replied: "Bees are property, and being such you cannot destroy the right of the owner therein. Any attempt of the Board to prohibit these farms on the ground that they are a menance to fruit farms would be usurpation by it of the functions of courts and juries, a denial to the citizen of his property-rights, and practically a confiscation of his property without due process of law."

The Board denied the petition, and the bee-keepers won a substantial victory.

The Union is to be congratulated upon another victory. While Mr. F. M. Hart's action was directed by the Union, he remained in perfect quietude, and his rights have been sustained. His neighbors became frightened at the cry of "the wolf," fled to the mountains, and sacrificed their property. How much cheaper and more comfortable it would have been to have held a membership ticket in the Union, and had its backing, moral support and defense!

E. Greeley, Loraine, O.

A neighbor of Mr. Elbert Greeley, at Lorain, O., circulated a petition asking the City Council to pass an ordinance to prohibit the keeping of bees in the city. The Council took the wisest course in its disposition of the petition, as, from the evidence at hand, it appears to have had its origin in a spirit of petty malice. Common justice demanded that Mr. Greeley's bees should not be declared a nuisance, and ordered removed from the city limits, while bees kept by others, within the limits of the same city, were not even mentioned.

Communication by Telegraph.

Mr. Greeley wrote thus: "No bee-keeper knows when he may be called upon to defend himself in court against the attack of some spiteful neighbor, who thinks to injure him through his bees. Therefore, all should join the Union at once. I think the Union should have a cipher, for use by telegraph, in case of emergency. In my case the petition was only circulated three or four days before the meeting of the new Council, giving me no chance to defend myself."

In case of emergency, business can be done by telegraph, of course, but it is essential to carefully consider such matters before involving lawsuits.

The only case the Union has lost was the Olmstead *vs.* Rich case, and in that an answer was demanded by telegraph. The statement was made that the Sheriff was threatening to collect the costs, which were very heavy (while the damage was only six cents), and Mr. R. wanted to appeal from the decision of the Supreme Court to the Court of Appeals, and demanded a reply by telegraph.

We do not like to have such important business done by telegraph.

Other Cases.

At Marine, Madison County, Ill., a spiteful man circulated a petition demanding to have the bees removed from the village. We dosed the officials with the decision of the Supreme Court, and heard no more of that petition.

At Easton, Pa., we score a victory won by a judicious use of the "Decision of the Supreme Court of Arkansas." An ordiance was there presented to the City Council declaring the keeping of bees a "nuisance," and imposing a penalty of $20 for its violation. It was referred to the Law Department, and Mr. C. G. Beitel appeared before that body, and addressed it by giving in substance the argument of Judge Williams (which we had already sent him), showing the absurdity of such an ordinance. The result was that the section relative to bees was stricken out by unanimous vote and the bee-keepers there were troubled no more.

At Hopkins, Mo., the "nuisance" fever has broken out; and in many other places it assailed apiarists, but was cured by a dose of the Arkansas Supreme Court decision.

Space fails me to further enumerate the work done during the year.

Officers for the Coming Year.

Eight years ago the offices were filled by the present incumbents. Each year they have been re-elected by large majorities. They have done well, and been perfectly harmonious in all their actions. But would it not be advisable now to have an entire change? Would it not inspire confidence and add largely to the membership? Some may think that the present officers have a mortgage on the places they fill, and to show all such persons that this is not the case, a change may be very desirable.

The General Manager knows that he expresses the feelings of *all* the officers when he says that they have no desire for re-election, and would be glad to give place to any others who may be selected by the votes of the membership at large. Their only desire is for the success of the Union in its great work of defending its members against the malicious attacks of the ignorant and prejudiced.

Any member is eligible to office. You should select from the list given in this report such as you desire to elect, and make out your ballot accordingly.

How to Become Members.

As this report will be sent to many not members, but who should become such, it may be well to say that the entrance fee is $1.00, and that pays for the dues of any portion of the unexpired calendar year, ending Dec. 31. Then it costs $1.00 for annual dues, which are payable every New Year's day, and must be paid within six months, in order to retain membership.

If membership ceases, then all claims against former members also cease; and all claims to the protection of the Union are dissolved.

Financial Statement.

Balance as per last report		$621.18
Fees from 571 members for 1890		571.00
		$1192.18
Court expenses, Attorney fees, printing briefs, etc.	$530.00	
Printing, postage, etc.	103.60	
		633.60
Balance, Dec. 10, 1891		$558.58

Liabilities.

The Union has engaged attorneys for the defense of several cases, the cost for which will have to be paid when they come up for trial—so we shall have use for all the money on hand and the dues for the next year—as the cases are reached on the docket.

Dues and Election of Officers.

It now becomes my duty to call for $1.00 for the coming year, as dues from each member. A Blank is enclosed to be used for sending it, and also a Voting Blank. Fill up all the blanks, and send to the Manager with a postal note or money-order for $1 in the envelope sent with it. It must be received by Feb. 1, 1892, or the vote will be lost.

Concluding Remarks.

The Union needs money, of course, but it needs members, and they are more important. Its moral power and influence is what counts, and a membership of 5,000 would be of more value than the $5,000 which it would bring.

Several of the attorneys who are members of the Union have assisted the General Manager in arranging cases, giving "opinions," and writing briefs, as well as giving advice concerning the management of cases on trial. The manager wishes to thank them all, but particularly to acknowledge his obligations to Messrs. J. E. Pond and G. W. Demaree for valuable assistance and counsel.

The General Manager has labored without the hope of reward, except such as comes from a consciousness of having done his duty, and is fully prepared to welcome his successor as soon as elected.

Thomas G. Newman, *Manager*,
199 Randolph street. Chicago, Ills.

Queries and Replies.

Putting Bees into the Cellar.

Query 797.—When is the proper time to put bees in the cellar in Iowa?—Newton.

November.—J. P. H. Brown.

I do not know.—J. E. Pond.

The early part of November.—G. M. Doolittle.

Just as soon as the weather seems to become cold. We do not put our bees in the cellar before the last fortnight of November.—Dadant & Son.

When it becomes settled cold weather. —H. D. Cutting.

November 10 to 20, on an average.— J. M. Hambaugh.

Just before hard freezing weather begins.—M. Mahin.

A little before the usual time of "freezing up."—R. L. Taylor.

From the last of October to Dec. 1, before the hives are frozen up.—C. C. Miller.

About Dec. 1, or as soon thereafter as they have had a last good flight.—C. H. Dibbern.

Just before severe weather in any State. In this latitude it comes about Nov. 15 to 20.—A. J. Cook.

Just about the time they cease flying for the season. This advice applies equally well to Delaware, and all other States.—James Heddon.

I believe the best time is as soon as they are semi-hibernating. I formerly advocated sometime in December, soon after a purifying flight.—Mrs. L. Harrison.

Any good bee-keeper in Iowa can answer your question better than I can. There is one thing certain, it injures bees to handle them after cold weather sets in.—G. W. Demaree.

I can see no advantage of putting bees into cellars before some freezing weather occurs. I should say to carry them in before it freezes hard enough to cause frost in the hives.—G. L. Tinker.

When settled cold weather comes, or when the bees are done flying. I usually put them in about the first week in November, but have put them in about the middle of October with good results. —A. B. Mason.

In Iowa, as well as in other States, bees should be put into the cellar as soon as they cease to fly, and settled cold weather has arrived. It will be interesting to read Mr. Doolittle's article on page 778, giving the results of his experiments.—The Editor.

We Have only a few Binders left of the large size, for the Bee Journals previous to this year. If you want one, please send at once, before all are gone, as we shall not have any more made. Price, 60 cents.

Topics of Interest.

Putting Bees into Winter Quarters Early.

G. M. DOOLITTLE.

Although we have had an unusually dry and pleasant Fall, in which it might appear that it would be best to have bees out on the summer stands a little later than usual, when intended for cellar wintering, yet, notwithstanding, I put my bees into the cellar Nov. 8 and 9, in as dry and nice a condition as they ever were, preferring to do this rather than trust to the chance of putting them in while wet and frosty a few weeks later.

From the last of November until the middle of December is the time given by many as best for putting the bees in. I formerly thought the same, being very anxious to give the bees an opportunity for the latest possible flight, so that they could better stand their long confinement.

Up to a few years ago I had supposed that a late flight was very beneficial, but at that time I resolved to experiment a little. So, on Nov. 3 I put one-third of the colonies intended for cellar wintering into the cellar. These bees had not been flying since about Oct. 30, and this caused me to hesitate a little. But I had resolved to make the trial, even if I was a loser by so doing.

The morning they were put in the mercury marked 44° in the shade, with the sun shining through the clouds occasionally, and I thought I should have trouble while carrying them in, on account of the necessary disturbance, fearing that they might fly out badly. However, much to my surprise, none offered to fly, and were very much less disturbed than any I had ever put in before.

Of the other two-thirds left out, one-third was put in on Nov. 12, after having a nice flight on the 11th. These were also dry and nice.

The last "third" was left out until the usual time of putting them in. There had been rains and snows, but it was quite cold when they were put in, so that the hives were frozen down, and in lifting they came up with a creak and snap. Often I had to put my foot on the bottom-board to separate it from the hive, or else to pry the two apart with a chisel. This jarred and disturbed the bees so that they came out all over the front of the hives after being put in place in the cellar.

I now learned that bees could be put into the cellar with less disturbance when the weather was about as warm outside of the cellar as the mercury marked inside of it, and my experience since has proved that such is the case.

Now for results: Of course, those put in last must be put out first. Again I found them more easily disturbed while putting out than the others, showing that they had hardly quieted down in all the Winter, or else remembered their experience of the Fall previous.

On being put out of the cellar there seemed to be little difference as to the strength of colonies, although, if any, it was in favor of those first put in. Later on, however, those last put in suffered considerably from Spring dwindling, thus proving that they had not been as quiet as the others in the cellar; at least I so think, for I firmly believe that the life of the bee is shortened just in proportion to the amount of work (or what amounts to the same thing, uneasiness or restlessness while in Winter quarters), which each individual bee does. A colony which is quiet during the Winter rarely, if ever, suffers from Spring dwindling, but the colony that is always ready to have individual bees fly to the light when the apiarist goes into the bee-cellar wears out, or, in other words, the vitality of the individual bees composing the colony becomes so exhausted that they die of old age before many young bees are reared, hence such a colony is liable to dwindle in the Spring. Between those first put in and the second lot, which had a good flight, I could not see a bit of difference, proving that a late Fall flight was not at all necessary.

I think there is nothing gained by leaving bees out late in the Fall, but, on the contrary, much is lost, and having my bees Winter well every year since putting them in early, proves that this thought is correct.

Again, all concede that bees will not Winter as well with the insides of the hives covered with frost, which melts as soon as they are placed in the cellar, thus causing the bees to be damp, even if the hive is not soaked to quite such an extent by wet weather, which is quite likely to be the case.

Besides putting bees in the cellar early, while they are dry and nice, I think the character of the cellar has much to do with successful Wintering. Unless it will maintain an even temperature of from 40° to 48°, standing most of the time at from 43° to 45°, I should prefer the bees to be outdoors in chaff-packed hives; and this temperature, too, whether bees were in it or not.

Some depend on the bees to control the temperature, but where it takes the bees to keep the temperature up in very cold weather, it is very liable to be too warm during a mild spell of weather in late Winter or early Spring.

Besides, when bees must "burn" honey to warm their hives and the room they are in, it causes a great loss of stores, and, what is of more importance, a great loss in vitality.

One colony of bees will Winter as well in my cellar as 100, or all that could be crowded into it. Herein is the advantage of my special cellar for bees, 8 feet under ground, in a side hill, according to my opinion. Such a place for bees is one long, dark night, with an even temperature of from 5 to 6 months duration.

Borodino, N. Y.

Forestry and Apiculture.

HENRY K. STALEY.

With the advent of civilization in this country, the destruction of the forests was looked upon as a pre-eminent necessity, as the pioneer had to have a clearing on which to found his home, raise his cereals, and keep a lookout for the dusky warrior. In those times of ligneous plenty, where the arduous task of first cutting down the trees and then clearing them away had to be accomplished before the soil could be cultivated, it is no wonder that our forefathers acquired antipathies against the forests, and never could see much virtue in a tree unless it would provide good fuel for the fire, or rails for the old worm fence. And so it came to pass, that those people who could show the greatest clearings, were looked upon as the most thrifty and industrious ones.

But as time has rolled along, great mutations have occurred in this country, and, paradoxical as it may seem, measures are adopted diametrically opposite to those which were considered indubitably correct in the past. When we look around us and behold the barren wastes, once well wooded, swept off by the unrelenting hand of man, to meet the righteous exactions of civilization, without any discrimination as to the kind or species of wood, we begin to have a different regard for the tree than our ancestors, in view of the fact that it requires centuries for the production of forests, and that already there is such a paucity of those valuable woods—the black walnut, hickory, ash and the white oak, as to make it only within the means of the rich to purchase articles made from them. Hence, we see that these trees are selling at a high price, and even those parts that were once considered useless are now being utilized. This is one reason why trees are now demanding our esteem, but there are others of the greatest moment.

Hillsides have been swept of their forestral coverings to such an extent that in consequence of the unnatural ullage of the land, the rich, superficial soil of the hills has been washed into the gullies, where it is practically unfit for cultivation, thereby leaving the hillsides in a gravelly and unremunerative condition, so far as farming is concerned. But this is not all, for as the roots decay —those natural moorings of the hills— gullies begin to appear on the surface, and, enlarging with each succeeding rain, make it very unprofitable, and an exceeding bore to its owner, as well as deprecating the land value of his farm.

Lands adjacent to rivers and rivulets, were laid bare with alacrity, as the water offered a ready and cheap means for its transportation to those cities where it could be sold to meet the demands of civilization; such as the toothpick trade, which is assuming enormous proportions to satiate one of our postprandial pleasures, the manufacture of matches, the productions of the industrial arts, poles and pole equipments for telegraph and telephone companies, and last but not least, ties for railroads. Because it was estimated that to furnish the requisite material for the 150,000 miles of railroad existing in 1884, would require the available lumber growing on a surface of land equivalent to the area of Connecticut and Rhode Island, and supposing that these ties had to be renewed once in 7 years, it would require the available lumber thriving on 565,714 acres.

It was also discovered that trees played an important part in the climatic conditions of the country. People knowing anything about carbonic acid gas, soon began to extol them, as by their absorption of this gas, they give off in return that most needed of all gases for the sustenance of life—oxygen. But when we look a little further, we find them not only purifiers of the fell and vitiated air, but great dispensers of water in the way of moisture. Let me explain: A maple tree 8 or 10 inches through, if well formed and prosperous, will have an average of about 25,000 leaves, capable of throwing off in the lapse of 12 hours, about 340,000 grains weight of water. Supposing an acre to contain 600 or 700 of these trees, and knowing that 7,000 grains, troy weight, are equivalent to one pint of water, we will find upon consideration, that one acre of woodland is capable of disseminating throughout the circumjacent atmosphere, about 3,875 gallons of pure water in every 12 hours. By so doing, they help to keep the air in a limpid and breathable condition, for both man and the quadrupeds.

They have proven themselves great distributors and regulators of the moisture that is condensed in Nature's alembic, and precipitated upon the earth in form of rain. By means of their fibrous roots and sponge-like accretion of rotted leaves, twigs, etc., they are capable of holding a vast amount of water, and by letting it out gradually, regulate the distribution of the rainfall. In wooded sections of our country we have small streams of long duration, while in those regions depopulated of their forests, we have streams of great volume, but short duration; hence, such sections have a succint atmosphere, and are blessed with long and protracted drouths.

Mills established on the outskirts of forests, with a plenteous water supply, ostensibly to procure lumber cheap, have, as the forests were cleared away, been either compelled to shut down, or else have recourse to reservoirs in times of drouth to catch the superabundant supply in time of floods. While we believe in giving due leeway to Melbourne's experiments, we feel that Nature has provided us with the best and surest means for the prevention of drouths.

Philanthropic men, becoming conscious of the demands and needs of the hour, began to give this topic their critical thought, and one of the hardest problems encountered was the following, to-wit: "How to perpetually keep a certain percentage of the superficial area of our country in forests, properly distributed, and to use and husband this in a manner that its usefulness be unimpaired." And right here I desire to say that this is an all-important question to the apiarists of this day. The kind of trees that will inhabit the unproductive hillsides and bordering lands of our rivers, in this reforestation, ought to lay mainly with them. We are aware that any good, thrifty and healthy tree will serve the purpose, but if by the disposal of a little activity, we can get trees planted that will cater to various ends at one and the same time in the way of their forestral benefits and honey-producing qualities, we have accomplished a great end. No bee-keeper fortunate enough to own a farm, should ever allow himself to become a party to the old saying, "Posterity has done nothing for me, why should I do anything for them?" When it comes to planting trees, whether he reaps the benefits or not, he should remember that nice groves of trees, judiciously grouped about his farm, will do much towards enhancing and beautifying it, besides providing cool retreats for the family in the Summer months. What could be more enjoyable to him than to be an occupant of these groves 'neath the thousands of bees sending forth their humming cadence, whilst filling his hives with garnered sweets. Looking at it in the grosser light of "filthy lucre," we find that trees add a money value to our farms, for people fleeing from the bustle and din of city life will pay a great deal more for a well-wooded farm than one Sahara-like. They are like Cowper, when he says:

> "O! for a lodge in some vast wilderness,
> Some boundless contiguity of shade."

Again, it should be remembered, the poet's words of

> "The groves were God's first temples,
> Ere man learned to hew the shaft and lay
> The architrave, and spread the roof above
> them."

are held as worthy memory gems.

You may talk of artificial pasturage for the production of honey, but I do not believe it a prosperous investment, unless it is done with a dual purpose in view. The raising of fruits, buckwheat and the clovers is well and good, because we not only receive a bountiful supply of honey, but a good secondary crop of the things we elected to raise, thereby not only gaining in the crops themselves in consequence of the fructification of the bloom by the bees, as is shown by more plentiful and more perfect fruit, and a greater production of clover seeds, besides garnering a good honey crop which would otherwise have been wasted on the desert air. And so it seems to me if the bee-keeper is thoughtful he will so manipulate his farm as to produce two remunerative crops in lieu of one, with about the same amount of labor.

Hence, I am against the planting of honey-producing plants solely for their saccharine sweetness, such as the Chapman honey-plant, catnip, spider-plant, sunflowers, etc., as I do not think the amount of honey obtained will recoup the bee-keeper for the labor and material expended. In recognizance of these things, and the preponderance of ignorance of bees, honey, and apiculture that is afloat over the land, accomplishing its diabolical effects in the hands of journalists and reporters, against an honest pursuit, bee-keepers should not be loth in joining agricultural, forestral and horticultural societies, where they can show thoughtful men their deceptions, and right the wrong already done to an honest pursuit.

I am not opposing apicultural associations, as I know their effects have been salutary, and that intercourse "is the soul of commerce." By the reading of essays, spirited debates, and sub-rosa conversations, there are exchanges of ideas and new phases of the subject matter brought out that redounds to the mutual benefit of all concerned. But there is a deal of admonishing done among these associations which I take as useless, given by those, no doubt, who are very timid about facing the skeptical ones, showing them that they have been deceived, and thereby dispossessing their minds of wrong and wild ideas. They are after the nature of the following poem, and desire other bee-keepers to wage war upon the fabricators of "wiley" and execrable honey lies, ignorant fruit sprayers, illiterate farmers, and misled grape-growers, which runs thusly:

I told Hezikah to tell the Widow Gray,
To tell Mother Brown, next door,
To tell Dickey Dwight, who goes that way,
To tell Deacon Barnes, at the store,
To tell the stage-driver, Timothy Bean,
To come for me sure, and in season;
But I've waited all day, and no stage have I seen,
And now, what do you think is the reason?

Whatever others may say, I am still of the opinion that that apiarist who argues and works with one that has been led astray, in so far as to the eating of grapes and fruits by bees, the spraying of fruit while in blossom, and the thousand and one lies bearing on bees and honey is concerned, is more to be revered as a benefactor of apiarists than one who discourses learnedly and at great length before audiences of industrious and intelligent bee-men, who no more need it than does a robust and healthy person medicine.

Now, I hold that bee-keepers could accomplish a great good, and help to undo a great deal of the Gordian-knot kind of injury already done us by joining or attending these kindred societies. Take, for instance, Forestry. By advocating the planting of trees that are premious in honey-producing capabilities, we will help to stock the land in a few years with trees that will be remunerative to the bee-keeper, as well as serving the intent for which they were planted. Look at the thousands of acres of public park lands throughout the country, which could have had their representation of honey-producing trees as well as not, if only a few bee-keepers had labored with those who had the authority of these places. Still there is a chance, for numerous parks are being yet created, but in nine cases out of ten will be stocked with such trees as the oaks, elms, sassafras, beeches, pines, birches, and sycamores, unless steps are taken by the bee-keepers for a fair representation of honey-secreting trees. We should not let these chances pass by unheeded, as there is everything to gain and nothing to lose, even though we may not live to be the beneficiaries.

Take the streets of our cities and the waysides of our country, and behold what an aspect they present for the furtherance of a honey-producing medium! What tree of more pulchritude and symmetricalness could you nominate for roadside, street and public park planting than the graceful linden? We should possess more of the spirit which predominates in this direction in the crowning gem of America's constitutionality—the City of Washington, D. C. "Unter den Lindens" would not only be found in Germany, but in all the large cities of our grand and glorious United States. Washington has her Unter den Linden in the Massachussetts avenue. Her North and South Capital streets are buttonholed with the stately tulips, which are fit emblems to thus adorn the meridian of the United States. The maples and other kinds come in for their share on the various avenues. I quote the following from the third annual report of the Ohio State Forestry Bureau, for the year 1887: "The plantings have also been made with proper regard for certain objective features, for instance, the famed 'Unter den Linden' of Berlin is less than a mile in length, and now more appreciable in history than in reality. The 'Unter den Linden' of the American capital is Massachussetts avenue. This superb sweep of residences, statues, and fountains, and even through its more sparsely settled portions to its terminus on the banks of the Anacostia, presents *four miles of vigorous and stately young lindens,* *twenty to thirty feet high.* The connections with streets and avenues similarly planted will, within a few years, give the 'Unter den Linden' of Washington a circuit of twelve miles." What more pleasing sight could greet the eye of the apiarist than this?

We have heard of large honey-flows coming from the tulips, lindens, locusts, and fruit-bloom, and if the apiarist is able to turn this mellifluent river into his honey receptacles, he will be able to make a livelihood should everything else fail. And I see no cause for his not doing so, in view of the great recent improvements and discoveries in the way of apicultural paraphernalia and artificial evaporation. It is true that these flows are of short length, but I would as soon avail myself of them and make as much in three days as three months. Now, then, in view of what has superceded, let the 300,000 apiarists take up the chorus of plant! plant! plant! Attend forestral conventions; advocate Arbor Days; plant lindens on your roadsides, the division lines of your farms and unproductive hillsides; encourage nurserymen to raise, park commissions to buy and plant and the government to disperse them; and, albeit, beet-sugar refineries are springing up in the West like mushrooms in a rich cow-pasture after an Autumn's rain, many of which are capable of producing 35 tons of sugar daily from 350 tons of beets—about ten per cent of the primal article—under the stimulus of bounty-paying, we need not be solicitious. Above all see to it that honey-secreting and pollen-bearing trees are planted. The maples are excellent caterers for early bee-bread, which is in either a natural or artificial state absolutely necesssary for the desideratum of early breeding.

Make yourself heard in the agricultural societies on the grave question of fruit-spraying. Explain to them that they are wrong, and elucidate the fact that the spraying of fruit-bloom does not kill the insects, but is very detrimental to the bee and humanity at large. Make it obvious that the fertilization of the blossoms will insure more perfect and sound specimens of fruit and a greater abundance thereof. Explain to them by indisputable proof that the mandibles of the bee are not capable of biting through the skin of a sound and solid grape, that the initiative is the work of wasps, birds, and an over-ripeness, and that only then do the bees insert their proboscides and appropriate a juice, minus which they would be better off, but which, on account of drouth and an insufficiency of honey-flora, they will seek after. Explain how that the bee is a benefactor instead of a nuisance, as some of the Arkadelphian ignoramuses would have it.

I think from what I have said, that many sources which could have been turned into a profit by the bee-keeper have been sadly neglected, and I would plead with my brother bee-keepers not to let this state of affairs continue any longer.

Remember that it takes a great many blossoms to produce a good crop of honey, and when it comes to the bread and butter part, Chapman's honey-plant, spider-plant, etc., are not "in it," but a good crop of the modest and unassuming white clover, or the linden, fills the bill.

"The pedigree of honey
Does not concern the bee,
A clover to him always
Is aristocracy."

Cincinnati, O.

Information About Alfalfa Clover.

WM. STOLLEY.

Receiving so many letters from bee-keepers requesting me to give them information about the growing of alfalfa, I cannot find the time to answer each separately. I desire to give the information asked for through the columns of the American Bee Journal, so far as I am able to do so. The general drift of these inquiries is about as follows:

1. What kind of soil is best adapted for the growth of alfalfa?
2. When should the seed be sown?
3. How do you prepare your land before seeding?
4. Do you find alfalfa perfectly hardy?
   a. Respecting very dry seasons?
   b. Respecting very cold and hard Winters?
5. What amount of seed is used for the seeding of one acre of land?
6. Do horses and cattle eat the hay of alfalfa as well as they do that of red clover?
7. Does alfalfa pasture well?
8. How do you proceed when cutting the crop, and curing or securing it?
9. How and when do you proceed when cutting for seed only?
10. How long will a field of alfalfa clover last before it runs out?

From the foregoing questions it is obvious that a busy man cannot individually answer many similar letters, and I hope that the following upon the subject will satisfy all:

All good corn land is also adapted for the growing of alfalfa, such as is not subject to overflows by water for any great length of time, and which has a sufficiently deep and retentive soil, so as to prevent a protracted drouth from killing the plants. Alfalfa prefers a deep and rich soil, since its roots penetrate the soil from 18 to 20 feet, if the condition of the soil admits of it.

This does not infer that alfalfa should be sown only on land which admits the plant to send its roots to that depth. A fertile soil 1½ or 2 feet deep, will answer very well, and will give good results. Owing to its deep rooting, alfalfa grows better here in very dry than in very wet seasons, as my land is in the Platte River bottom, where the fertile soil is but from 4 to 6 feet deep, below which is sand and gravel, and next water.

The seed should be sown as soon as the soil is sufficiently warm for the seed to germinate, and not earlier.

About corn-planting time I consider the proper time to sow the alfalfa seed in Nebraska; say from May 1 to 15.

The land on which alfalfa is to be grown should be well prepared for it. It is best to fallow the land in the Summer, previous to seeding. A heavy coat of stable manure applied at the time when fallowed, is very beneficial, and will prove to be of great good for years; use from 20 to 25 loads per acre. Deep Fall plowing should follow the Summer fallow; and on land subject to drouth, or high rolling prairie, with clay sub-soil, I would sub-soil the land about 2 feet in depth.

The following Spring, and immediately before seeding, the land should be well harrowed and pulverized, when about 15 pounds of good seed should be sown to the acre, and be slightly covered by a brush-drag.

Should it happen that immediately after the sowing of the seed a heavy rain settles the soil, then the covering of the seed with a brush-drag, or light wooden harrow, is not needed; but if a dry spell should follow the seeding, then after the brushing in, a roller should be run over the field, to make the surface soil more compact and retentive.

During the first season of its growth, alfalfa should be cut but once; leaving a rather high stubble.

This cutting should be done just in time to prevent any weeds from maturing their seed, if possible.

The "after growth" of the alfalfa in the first season should be allowed to remain, and serve as a winter protection for the young and yet somewhat tender plant. All pasturing of stock on it in the first season should be avoided.

On suitable soil, such as I have mentioned, I find alfalfa to be perfectly hardy, in dry seasons as well as exceptionally cold and severe Winters, if treated properly. As food for stock of all kinds, I find alfalfa to be equal to the very best of fodder, red clover included, if properly cured and cared for.

The second year it may be cut twice without injury to the young plants; and in the third year and thereafter, three cuttings at the proper time is the rule here; while in some parts of Texas (near Austin) I know that alfalfa fields were cut even 4 times.

For hay, alfalfa should be cut as soon as the *first* seed pods have well developed. It should, after cutting (if possible), not become too dry and brittle, so as to lose its leaves, when raked or worked by the hay-loader.

When stacked or haulded into the barn, on each layer of clover should be given a liberal sprinkle of salt. This should be followed up to the end of the storage of the alfalfa; and I venture to say that there is nothing better for milch-cows, cattle or horses than alfalfa clover hay, thus treated and cured.

Alfalfa is not a pasturage plant, but "moderate" pasturage will not injure it, after it is once well established, say, in the Fall of the second year and afterwards.

Care should be taken not to allow stock to pasture too long at a time on it, when first let into an alfalfa field. One of my neighbors once lost several valuable milch-cows by their becoming bloated. Stock should be allowed but an hour at a time, or even less, to feed on green alfalfa when first driven to it.

Cattle should not be allowed to enter an alfalfa field at all, as long as alfalfa is wet with heavy dew or rain, unless they are, and have been used to pasturing on it for sometime; and even then I believe it to be dangerous, if they are allowed to fill themselves.

It is said by parties who ought to know, that alfalfa, if grown on suitable land, is very profitable for 20 years without re-seeding, provided that it is occasionally treated to a dressing of top-manure in the Fall, and after the last cutting has been done.

The same parties informed me that it is not good policy to take a crop of seed from young and promising fields, but that it is best to postpone the seed harvest until a field of alfalfa has become old, and is destined soon to be plowed up.

I will know more about this later on, and after I have seen the effect of the cutting for seed of a small field this season. I have no seed for sale.

Grand Island, Nebr.

Reason or Instinct in Bees.

JAMES M. TODD.

If I had been asked to reply to Query No. 791, I would have answered, "No!" Most emphatically "No!" Who ever heard of a bee doing a reasonable thing in his bee experience? My bees have not a bit of sense, and I can prove it to any unprejudiced mind in five minutes after arriving at my apiary.

Dr. Holbrook seems to think that he has settled the question, by citing the fact of bees failing to lay up Winter stores in the hotter climes. I think that action, or lack of action, is owing to the enervating effect of the climate. In other words, they are too lazy.

The Doctor says: "The Italian bees will sometimes attack, in mass, a man who has robbed their hive days after the occurrence, as if to destroy him." I need not tell bee-men that such is not the only man they attack. If it was, there might be some point to the argument.

This calls up another extremely unreasonable action of bees. Who has not seen a lot of bees trying to extract "heaven-distilled nectar" from a fresh heap of barn-yard fertilizer? Have they any reason to believe it is honey? Perhaps our Utah bees have catarrh so badly that their olfactories deceive them.

Animals never reason; never think. Horses, dogs and other animals have saved drowning persons' lives, but it was "inherited instinct"—nothing more. All their ancestors had been doing the same thing ever since protoplasm took its first breath.

When my little three-year-old boy strayed a mile from home, and insisted on going farther in the same direction, my large dog stopped the little fellow and tried to force him home, and when he found that it would be long after dark before he could reach the house, he began to howl most piteously with all the strength of his lungs, thereby attracting our attention. That was not an evidence of superior dog-reason, but only a proof that all dogs always do the same.

No animal ever based its actions on an analogy—similarity of circumstances or conditions—that anybody ever heard of. They universally and invariably do all things from instinct, never learning anything from expeirence, or basing any of their future actions on a past experience.

If some of our very voluminous bee-writers were bees, how they would show the poor fool-bees how to adapt themselves to their varying conditions! They would teach the bee the instinct of always doing what was plainly the most reasonable thing to do. Then they would teach them how unreasonable it was to attempt to live on the earnings of their fellows, and point them to the noble example of reasoning man.

If there is still a doubting Thomas let him turn to Webster, and there learn that reason is: 2. "The faculty or capacity of the human mind, by which it is distinguished from the lower animals." That settles it. If any one of the inferior animals should once reason, he would there and then have a human mind, for that is all that distinguishes between the inferior and the human mind. Paley says (see Webster): "An instinct is a propensity prior to experience, and independent of instruction."

Now, then, all I have to prove is that no animal ever bases its action on instruction, but acts, always, "independent of instruction."

Payson, Utah, Nov. 14, 1891.

Foul-Brood Cannot Exist in Foundation.

T. H. KLOER.

I have just read Mr. Corneil's last article on "Foul-Brood Spread by Comb-Foundation," with great interest, as I read all of Mr. Corneil's articles. I am quite interested in this vital question, as I am a maker of foundation myself, and also quite an enthusiastic experimenter in methods of rendering wax from old combs.

Now, while reading, it suddenly dawned upon me—nay, I may say it flashed upon me like an electric light—that none of the parties to this controversy have yet seen the matter in its true nature.

I have often wished I were a scientist, but I am not. Neither can I offer any experiments showing the degree of temperature required to kill the spores of foul-brood in melted wax. But I believe I can tell Mr. C. why it will not be at all necessary to spend much time, and better still in these hard times, any money, to determine that point. This may put Dr. Sternberg out of a job, but it will be "all for the better."

I believe that I can assure Mr. C. that every spore of foul-brood that has ever been in melted beeswax during the processes of rendering, refining and sheeting for foundation, is as dead as an Egyptian mummy. How do I know? Why, Mr. C. proved it to me in his last article. The funny part of it is he does not see it in the same light as I do, and that none of the veterans like the Dadants and the Roots have "caught on" to the point.

But to the proof: Just turn to page 714 of the AMERICAN BEE JOURNAL, where Mr. C. quotes a paragraph from Mr. Dadant's article, in which the latter says: "Sometimes we find bits of paper, which, soaked with wax, are so transparent that it seems impossible to separate the two substances, yet, when our cakes of wax are cold, we find the paper altogether clear of wax." See, then, how Mr. C. goes to work and proves, in a very wise experiment, that Mr. D. is mistaken, that paper once saturated with wax cannot be freed from it by any amount of boiling in water, and that he concludes thus: "It must now be clear to the reader that in Mr. Dadant's molds all foreign matters, including foul-brood spores, remain like the paper encased in wax.

Now, mark well the words, "incased in wax." Was it not rather saturated with wax? Was it not so well saturated that no amount of boiling in clean water would free it from the wax? And why should Mr. C. continually talk of "foul-brood spores encased in wax?" Are not dry foul-brood spores certain to be not only encased, but saturated with wax? And, being once saturated, does Mr. C. think that any amount of boiling would ever free them from wax? Remember that Mr. C. himself says, right at the top of page 714, that the dry and indurated spores are the most obdurate to the effects of heat. Now, any one at all used to melting much wax knows how very penetrating hot beeswax is. Stick in a piece of dry wood and it will be soaked so that you can never free it from the wax. Heat your finger and put it, perfectly dry, into wax even moderately hot, and it is next to impossible to get the wax off without taking parts of the cuticle along. Then why should foul-brood spores alone be only "encased" in wax, and not saturated? I think they are saturated. And does any one think that any such saturated spores as remain in foundation can be infused with life? Well, I for one do not. But I am open to conviction.

I will only, in conclusion, state that I do not think it requires very hot wax to be penetrating; that, directly after it has passed the melting stage, it will penetrate dry substances of any kind which can be at all penetrated, provided they are of the same temperature as the wax, and left in contact with it for awhile.

Terre Haute, Ind.

Bee Notes from Nebraska.

J. M. YOUNG.

Having fully recovered my health, I pen a few more notes for the AMERICAN BEE JOURNAL:

My apiary has been sadly neglected for some months, as well as my correspondence, just for the want of my own personal care and attention.

My bees have been packed away for Winter, and have received all the attention they will get until Spring opens. All the new colonies are in single-walled hives, where they stood on the summer stands. The rest of the bees are in Winter chaff-hives, carefully packed with chaff and forest leaves above the frames.

If the Winter is mild, perhaps the bees in the dovetailed single hives will come through all right without the chaff packing, otherwise, should the Winter be severe, nothing else can be expected than that there would be a number of empty hives.

Just how much our crop of honey has amounted to I am not able to say now, but hope to announce at some future time. I have an account of every pound of honey sold, and generally at the close of the year a showing is made of the number of pounds sold, and for how much. These accounts give interesting information to the bee-keeper, if kept properly, from year to year. Beginners should try them and see for themselves.

Bees were flying in this locality on Nov. 30 and Dec. 1, when the weather was quite warm, and the prospects to-day are that they will be out again. A good "fly" early in December is a good indication that bees will come through the Winter well, and be in fair condition next Spring.

A short visit to Mr. Noah Clemons a few days ago, who lives some five miles south, disclosed the fact that he has a very pretty apiary of about 40 colonies. Mr. Clemons always Winters his bees in cellars with success. As the weather is fine yet, his bees are still on the summer stands, but ready to move into Winter quarters at a moment's notice.

Plattsmouth, Nebr., Dec. 4, 1891.

Shipping Bees by Rail and Wagon.

L. C. FINCH.

As I have had a little experience in shipping bees, I thought a statement of some of it might interest some of the readers of the BEE JOURNAL.

I purchased 50 colonies of bees last July of Mr. William Crawley, who resides at Redwood Falls, Minn. He selected them from 130 colonies in his apiary, and prepared them for Winter. He also prepared them for shipment. 45 of the hives had closed-end frames, and 5 had hanging frames. All the hives were of small size, holding 8 Langstroth frames. He tiered them up, fastening the top story with cleats, and closing the entrances. The top stories contained empty frames, so as to give plenty of ventilation.

They were hauled in wagons half a mile, and loaded into a box-car. They were tiered up two tiers high, and fastened solidly by nailing pieces of 2x6 across the car—the hives filling the space thus partitioned off. The car also contained two cows and some household goods. They were shipped on Nov. 17, 1891, and I received them the 18th, all in good condition, having come by rail 120 miles.

We loaded them on spring wagons, and hauled them five miles to our apiary with teams. The roads were smooth, but it was very cold—near zero—at the time. We got them in the cellar by noon of the next day. It took us some time to get them in, as we had to take off the top stories, and use some smoke to get the bees into the brood-chamber. We had to reverse the bottom-boards. We use the same kind of bottom-boards that Dr. C. C. Miller uses, and we like them for cellar wintering.

Only 2 colonies had a comb broken down, and they had closed-end frames. I shall use the eight-frame Langstroth hive, as I have them with the hanging frames.

I now have 56 colonies in the cellar, and ventilate through the hatchway doors, using a small pipe and a damper.

I hived a colony of bees in the woods, on Oct. 25. They were clustered on a small tree near the place where we had cut a bee-tree, and taken the honey. It was a large colony of nice three-banded Italians. I could not think of letting them starve without trying to save them. I hived them by bending the tree over the inverted hive, and shaking them into it. Then I turned the hive over, placing it on the bottom-board. By using a little smoke, I soon had them in the hive.

I tied the bottom and cover on, using the hitching-strap. Then I carried them half a mile in my arms to the buggy, and took them home in it. I gave them frames with drawn-comb, and fed them 25 pounds of granulated sugar syrup, mixed with a little honey. They stored it all, and capped most of it, as it was nice, warm weather, and continued so for several days. They are my pets, and I shall try hard to save them.

This is a good locality for bees, but in the past season they did not gather over half a crop, as the season was very dry, but we live in hopes of a bountiful harvest next year.

Clinton Falls, Minn.

Convention at Greeley, Colorado.

H. E. ENGLISH.

In response to a call issued by Messrs. Adams and English, about 40 bee-keepers, of Weld County, met at the Court House on Nov. 28, 1891. The meeting was called to order by C. Adams, and a temporary organization was perfected by electing D. S. Beall, of Evans, President, and T. V. Jessup, Secretary.

A motion was made that we organize a Weld County Bee-Keepers' Association. Carried.

A permanent organization was perfected by electing D. S. Beall, President; C. Adams, Treasurer, and H. E. English, Secretary.

On motion it was decided to make the membership fee 50 cents, when twenty-four members paid the fee, and had their names entered on the roll.

After the appointment of the necessary committees, the Convention listened to some well-chosen remarks by A. I. Root, of Medina, Ohio, who favored us with his presence, and interested us with information on foul-brood, which has already made its appearance in this State.

About 2,000 colonies of bees were represented at the Convention.

The Convention adjourned to meet sometime in February, 1892, at which time they expect to double their membership, and anticipate the pleasure of having Professor Cook and other distinguished bee-keepers present.

Greeley, Colo., Nov. 30, 1891.

◆

Grade for Premium Honey.

J. W. BLODGETT.

My bees came through the Winter well. There were 54 colonies, some strong and some weak. From them I obtained 3,500 pounds of honey, in one-pound sections. Of that amount I had 800 pounds of honey-dew, which I am keeping to feed to the bees next Spring. I now have 73 colonies in fair condition. I fear the effects of the honey-dew in the hives, for I don't think it wholesome food for man or bee. Last Spring the weather was so wet that the clover yielded nothing. Linden did better, but it is too far from my apiary to be of much use for surplus from that source. Heart's-ease did well. Most of my honey was from that source. It is of excellent quality, but it is a little dark. So, all in all, we have had a poor season as far as honey is concerned; but it has been as good as corn, for that is but half a crop. We are having fine rains and snows to keep the clover in good condition to Winter well. The ground will be filled with water, for it has not yet frozen, and it will absorb it all. I am not discouraged in the least, for I think that the prospects are good for a crop of clover-honey next year.

Now, as we are talking about grading honey, I think there ought to be one more grade than the Northwestern Convention decided upon, and that is for "Premium Honey." That should have all worker cells, and be perfectly filled; it should be as white as snow. The first grade to be filled and fastened all around the sections, may have used drawn-comb, but must be white and straight.

The second grade must be well-filled, but may not be bright clear down to the bottom, but must be good every other way.

Third grade may be dark, but must not be honey-dew.

Empire Prairie, Mo.

◆

We Club the American Bee Journal and the Illustrated Home Journal, one year for $1.35. Both of these and Gleanings in Bee Culture, for one year, for $2.15.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Dec. 22.—The Carolina, at Charlotte.
A. S. Beach, Sec., Pineville, N. C.

Dec. 31.—Michigan State, at Grand Rapids.
Geo. E. Hilton, Sec., Fremont, Mich.

1892.
Jan. 6, 7.—California State, at Los Angeles.
C. W. Brodbeck, Sec., Los Angeles, Calif.

Jan. 18, 19.—Colorado State, at Denver.
H. Knight, Sec., Littleton, Colo.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—P. H. Elwood....Starkville, N. Y
SECRETARY—C. P. Dadant......Hamilton, Ills.

◆

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

Bee and Honey Gossip.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Twenty Years of Bee-Keeping.

I have read the BEE JOURNAL for 10 years, and often find helpful suggestions in it. I have kept from 8 to 12 colonies of bees during the past 20 years. The past season has been a very poor one. The surplus gathered by the bees was not fit to eat, being the so-called honey-dew. I had to feed my bees with sugar syrup for Winter stores. C. ZOLL.

Vermont, Ill., Dec. 3, 1891.

◆

Average Yield per Colony.

Our honey crop is short this year. I have only 50 pounds of honey per colony, Spring count, and that is all dark. Some of it is even black from honey-dew. In ordinary years we have from 140 to 200 pounds, and in extraordinary years from 275 to 350 pounds. Mr. E. J. Baxter, of Nauvoo, Ill., generally reports nearly 300 pounds per colony. This is quite a different report from that mentioned by Mr. W. J. Davis, on page 684. If we in Iowa had only 10 pounds per colony for five years in succession, we would give it up and buy our honey for family use at seven cents per pound or less—

extracted honey. A friend of mine commenced with one colony that gave him three swarms and 400 pounds of honey in one Summer.

L. HAMMERSCHMIDT.

Amana, Iowa.

Small Fall Crop of Honey.

I bought one colony of bees last March. They swarmed twice, and gave 42 pounds of honey in one-pound sections. I take the AMERICAN BEE JOURNAL, and your book "Bees and Honey" for my guide. Bees did very well here early in the season, but it was too dry. Bees gathered a very little nectar in the Fall from smartweed and golden-rod.

Midland, Mo. A. D. WALLIS.

Southern Moss for Christmas.

I have received several letters from friends, asking if I would send them some of our lovely Southern moss for Christmas decorations. Certainly; I will forward it with pleasure to all who send stamps for postage, as there is plenty of it here, it is easy to get, and I have ample time to do it. Send postage at the rate of 16 cents per pound, or if you wish a large four-pound roll of moss, send 64 cents in stamps, and I will mail that amount to you. Do not plant the moss, as it is properly an air-plant, but hang or drape it anywhere. Keep it moist and it will continue growing.

MRS. F. A. WARNER.

St. Nicholas, Fla.

Butler's Anti-Honey-Board Frame.

I would like to say a word in favor of Mr. Butler's anti-honey-board frame (see page 709). This frame, with a flat bar, instead of the V-shaped strip, deserves more credit than some think best to give it. About 8 years ago I experimented largely with brood-frames. I made and tested them with top-bars of various patterns. My object was to get rid of both burr-combs and honey-boards. A few tests proved to my own satisfaction that the break-joint feature of the honey-board was all a hoax, that brood-frames with a double top-bar, accurately spread, compared favorably with the slatted honey-board. Why not? Bees are inclined to bridge the *first* bee-space. This privilege is not denied them. The burr-combs and passages are between the double-bars. Why, then, use a honey-board or Hill's device?

Belle Vernon, Pa. A. B. BAIRD.

Bee-Keepers and Raisin Growers.

I am glad to be able to state that the fruit men are getting to look at the bees in a different light—more of them acknowledging that they are a benefit to the friut industry. Even one of my worst opponents was heard to remark the other day that the trouble between bee-keepers and grape-growers was not so much the fault of the bees as it was in the handling of the grapes while drying. This same man swore in court that fogs and light rains were a benefit to the raisins while drying. This Fall the weather has been very dry and warm, and the raisins are all dried, even the second crop, without loss.

Messina, Calif. GUSTAV BOHN.

Bees in the Cellar.

I always see that my bees are comfortably housed by Nov. 1, and that they have plenty of stores. If the temperature is kept at about 45°, about 12 pounds of well-ripened honey will suffice for ordinary colonies. I have had them come out in good condition when they had only 10 pounds of stores for Winter. I have lost none for two Winters. My cellar is dry. The past season was very poor for honey gathering. Many bee-keepers got no surplus. My bees did well, giving 700 pounds of nice comb-honey, which I sold at home at 15 cents per pound. J. ARROWOOD.

Swan Lake, Minn.

Foul-Brood.

I have seen so much of late about foul-brood, that I thought a word from one who has had long experience with it would not be amiss. During the year 1880 I lost, out of about 100 colonies, all but four with foul-brood. I notice that some claim that the spores only are carried, and that the disease is spread by honey alone. But my bees contracted the disease from an empty hive that I bought in Dallas and carried home. A foul-brood colony had, of course, occupied the hive, and I found that the disease would spread from hive to hive by robbing, by changing queens or hives, or by keeping diseased colonies in the yard. Others took it whether they robbed or not, and the scalding or the starving plans, or putting empty hives on foundation, did no good. It kept on until the whole apiary was destroyed. When I extracted any honey, there would be enough of the foul-brood matter to make the honey look and act like jelly. When foul-brood is as bad as that, there is no cure without burning up everything. After all the bees in range died it ceased, and I have not seen any foul-brood in this country for eight years. My bees did well last season, and all are now in good condition.

MRS. JENNIE ATCHLEY.

Farmersville, Tex., Dec. 9, 1891.

Honey-Dew Used for Brood-Rearing.

This has been another "off year" in the honey business. The season opened favorably. There was plenty of early bloom, such as maples, apples, peaches and plums, all of which yielded considerable honey, but the white clover failed to give any surplus worth mentioning. The oaks yielded considerable honey-dew, so much that some fear that it would cause a large loss of bees this Winter, but it was nearly all used up in brood-rearing. The Fall honey-flow did not amount to much, so that a good deal of sugar syrup was fed for Winter stores. Some bee-keepers have not fed their bees anything, so there will be a large loss of bees this Winter from starvation. We have just had quite a heavy snow. I have my bees all snugly put away in straw, in a shed where, heretofore, they have successfully wintered. The last two seasons having been poor, it is causing the amateurs to lose their grip.

MARION MILLER.

Le Claire, Iowa, Dec. 8, 1891.

Bees Did Well this Year.

I commenced this year with 5 colonies, Spring count. They gathered 350 pounds of honey, and gave 3 natural swarms, and I made 2 by division. I have done better this year than any one else in our county; others generally report no honey; but some obtained a very little. Keeping bees is a new thing in this locality, and there are but a few who know anything about it.

Ellison, Wis. LEVI REICHARD.

Report for the Season.

In the Fall of 1890 I had 14 colonies all in fair condition. One became queenless in the Spring, and died. The rest were stronger on April 9, when I first examined them, than they were in the Fall, having bred very strongly in February and March. They had used up all the pollen they had, and at the time I first opened the hives only a little brood was found, and that was hatching out. By June 1 most of them were short of stores, and there was but little coming in. The weather was cold and stormy. I fed some, and ought to have fed all of the colonies for a month, as they bred up very slowly, and some were not strong enough to store any surplus. Surplus honey began to come in about the last of July, and in August I got two swarms, both from one colony, and that was all. From the last of July the honey-flow continued until about Sept. 10, when it was cut off by drouth. I secured over 400 pounds of comb-honey in one-pound sections, and the colony that cast two swarms had over 100 pounds of honey, all nicely capped. All of them went into Winter quarters in good condition, and with plenty of stores.

GEO. GALE.

Adams, Neb., Dec. 10, 1891.

Bee-Feeder.

There has never yet been a feeder invented that could be called perfect. A perfect bee-feeder should be inexpensive, durable and easy of access. It should be applied in such a manner that it can be refilled readily without coming in contact with an army of cross bees. It should be so constructed that it can be applied to different kinds of hives in different positions. It should be an entrance feeder as well as a top feeder, and should be well joined, so that there can be no leakage whatever. All the defects of other feeders I have overcome in one I have lately made, which I think is the most practical ever put upon the market. My needs as a breeder have driven me to invent this feeder for "all-around" use.

E. L. PRATT.

Beverly, Mass.

Yellow Carniolan Bees.

I was sorry to see unpleasant personalities mixed up with the answer to Mr. Alley's defense of his yellow Carniolan bees. Let the matter be tested. Surely some isolated island or spot of ground can be found where there are no bees. Let such a place be selected by the editor of the AMERICAN BEE JOURNAL, Mr. A. I. Root, and Professor Cook. Then let some one who says that the yellow Carniolan bees cannot be produced out of the grays, select a colony of grays to be worked over. Then let these men select an honest apiarist to take the selected grays to that spot of ground. Let the breeder, selected for the task, follow out Mr. Alley's directions to the letter, being careful that there are no bees but the grays near. If, under the above management, the yellow bees are produced, then Mr. Alley is in the right. Let him have the honor that rightly belongs to him. Let the matter be tested fully and honestly, but do not abuse or use unpleasant personalities.

JOHN D. A. FISHER.

Woodside, N. C.

Reply to Mr. Davis.

The article of Mr. W. J. Davis, on page 684, calls for a brief reply from me. I expected some one to whet the sword, but did not look for such an attack from home, much less from an American. Judging from the tenor of the various bee-periodicals in the United States, the writer had been of the opinion that the bee-keeping fraternity in America were a class who would live for and with each other; or, in other words, that they were filled with love, union, harmony and sympathy, but it appears that sympathy does not always run where it should, and for whom it should. Mr. Davis objects to the following statement of mine: "For in ordinary seasons (which should have read extraordinary seasons—for such was meant) it is no uncommon thing to harvest from 140 to 200 pounds of honey per colony, and experts who have their colonies ready for the honey-flow, have produced as much as 300 pounds per colony." I am quite willing now to repeat the same words, and many will testify to their truthfulness, among them we will mention the following: Frank Smith, of Plum City, Wis., extracted, a year ago, 700 pounds of honey from 7 colonies, and this was his first year of bee-keeping. Mrs. Green, of Ono, Wis., obtained 140 pounds of honey per colony. L. Hammerschmidt, of Iowa (page 787), says: "In ordinary years we have from 140 to 200 pounds, and in extraordinary years from 275 to 350 pounds." It is unnecessary to occupy space with further proof. It is obvious that 299,999 out of the 300,000 bee-keepers in the United States will *not* agree with Mr. Davis. As the other points made by Mr. D. are not worthy of consideration, I shall not deign to notice them.

S. ROESE.

Maiden Rock, Wis.

Get a Binder, and always have your BEE JOURNALS ready for reference. We will mail you one for 50 cents.

Wavelets of News.

Swarm Deserting its Hive.

A. C. J. P.

That beautiful swarm,
It has all gone—
What a pity!

Drones, bees, and queen,
Nothing to be seen—
What a pity!

No cheerful hum to greet
When you are on your beat—
What a pity!

The hive out there to rot,
Perhaps to be forgot—
What a pity!

Perhaps one Summer day
In May, before the hay,
Another song we'll sing,
Without this doleful ring,
And not a pity.
—British Bee Journal.

Foul-Brood Honey.

We have been looking over the programme of the National Convention, and as it will be impossible for us to be present, we should like some points talked over, and some facts brought out.

First, in connection with foul-brood: It seems as if some scientists have put forth certain theories or statements that are not borne out in practice in this country.

When bees have been properly fasted, has any one ever known the disease to return? What is the simplest, cheapest, surest, and best method of getting rid of the disease?

Would it not be advisable to make it a serious offence to sell honey infected with foul-brood, as it is easily seen how the disease may be scattered broadcast throughout the land by a few packages of foul-brood honey, left carelessly about for the bees to get at?

Some have suggested the propriety of forcing every person who has foul-brood honey, to boil it before selling. This seems to be a difficulty, as the boiling of honey would necessarily destroy its color, texture and flavor, and reduce it in value very much.

The disease would not effect it if sold for baking purposes, and perhaps that would be the best way to dispose of it; or for printers' rollers, curing of meat, or the manufacture of confectionery.

The only way to accomplish that would be to prevent those having foul-brood from selling any honey until the yard was completely rid of the disease.

Another point that we would like brought out at the Convention is the possibility of carrying out some plan similar to Alpaugh's, by which large quantities of surplus honey could be obtained at the smallest possible expenditure.

A system that would enable us to produce as much comb as extracted-honey, would, perhaps, increase our profits.—*Canadian Bee Journal.*

Intoxicated Bees.

While reading the interesting notes on hardy flowers, by Mr. S. Arnott, they brought to memory his promise of last year to investigate the cause of bees becoming torpid when working upon *Sedum Fabaria* or *S. spectabile.*

Owing to the unfavorable state of the weather, and the influence it has upon some flowers more than others, in preventing them from being in a fit state to induce bees to work upon them, I have been unable to carry out my projected experiments. Although the plants flowered well this year, they were not much visited by bees in the past Autumn.

Sedum ibericum, during Summer, was as usual very attractive to them. On one occasion I observed a few bees alight upon the large purple heads, so pretty at that season. I had only a few steps to take to reach the plants, but although a few seconds only had elapsed, two of about a dozen of the bees at work were in a torpid or intoxicated state. A shower of rain put an end to what I had hoped to be a discovery—that the flowers, in addition to the secretion of honey, also distill something of an intoxicating nature. Although most of the bees seemed to be unaffected, the two in question were instantly affected, which I thought from the effects of sipping a sort of ether, which sometimes stands in little globules on the top of the petals. I held the two bees in my hand for thirty minutes before they recovered from their torpor and were able to fly. I hope Mr. Arnott will give us the benefit of his observations.—*London Journal of Horticulture.*

Bees do not Injure Fruit.

In California an attempt has been made to grow grapes and conduct an apiary with it. The bees have been given the freedom of the vineyard, and no injury has been done to the fruit. This is proof positive that bees do not puncture the skins of fruit, nor otherwise injure it. California apiarists will yet demonstrate to fruit-growers that the bees have improved fruit growing rather that injured it.—*Exchange.*

New Races of Bees.

If the Government at Washington is inclined to send some one to search out new races of bees, and get us further information, we think it due to Mr. Benton that the North American Bee-Keepers' Convention should express themselves very strongly in his favor, and from our acquaintance with him, we are convinced that no other person in the United States is so well suited to carry out that expedition successfully in the interest of bee-keepers. His past sacrifices should be considered in this matter, and if he would consent to accept the duty, we think it would be so well performed that the results would be all that could possibly be attained.—*Canadian Bee Journal.*

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

A Nice Pocket Dictionary will be given as a premium for only **one new** subscriber to this JOURNAL, with $1.00. It is a splendid little Dictionary—just right for the pocket. Price, **25 cents.**

Convention Notices.

☞ The annual meeting of the Colorado State Bee-Keepers' Association will be held in Denver, Jan. 18 and 19, 1892.
H. KNIGHT, Sec., Littleton, Colo.

☞ The Carolina Bee-Keepers' Association will meet at the Court House in Charlotte, N. C., on Dec. 22, 1891. A full attendance is earnestly desired.
A. S. BEACH, Sec., Pineville, N. C.

☞ The Michigan State Bee-Keepers' Association will meet in Grand Rapids, Mich., on Thursday, Dec. 31, 1891, and Friday, Jan. 1, 1892, GEO. E. HILTON, Sec., Fremont, Mich.

☞ A special session of the California Bee-Keepers' Association, in honor of the visit of Prof. A. J. Cook and A. I. Root, will be held in Los Angeles, Calif., at the Chamber of Commerce, Jan. 6 and 7, 1892. The California permanent exhibit in an adjoining room, will no doubt be of interest to all.
C. W. ABBOTT, Prest.
G. W. BRODBECK, Sec.

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ALFRED H. NEWMAN,
BUSINESS MANAGER.

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All New subscribers for 1892 will receive the remaining numbers of this year *free*.

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To Annual Advertisers.—On all contracts made for the year 1892, we will insert the advertisement as soon as received, and no charge will be made for the insertions this year. The matter may be changed at any time, without cost to the advertiser. "The early bird catches the worm." Write for our terms, and the sooner the contract is made the more free insertions will be given.

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We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club.*
The American Bee Journal	$1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	2 00	1 75
The Apiculturist	1 75	1 65
Canadian Bee Journal	1 75	1 65
American Bee-Keeper	1 50	1 40
The 7 above-named papers	6 00	5 00
and Langstroth Revised (Dadant)	3 00	2 75
Cook's Manual (1887 edition)	2 25	2 00
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Doolittle on Queen-Rearing	2 00	1 75
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 50	1 35
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Toronto Globe (weekly)	2 00	1 70
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Rural New Yorker	2 50	2 00
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Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

◆

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the BEE JOURNAL (with $1.00 to pay for the same), or 2 subscribers to the HOME JOURNAL may be sent instead of one for the BEE JOURNAL.

◆

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.

HONEY AND BEESWAX MARKET.

NEW YORK, Dec. 11.—Demand is limited, and supply sufficient. We quote: Comb—Fancy white, 1-lb., 14@15c; 2-lb., 12c; off grades, 1-lb., 12@13c; 2-lb., 10@11c; buckwheat, 1-lb., 10@11c; 2-lb., 9c. Extracted—Basswood, white clover and California, 6¾@7c; orange bloom, 7@7½c; Southern, 65@70c ℔ gal. Beeswax, 26@27c.
HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, Mo., Dec. 12.—Demand and supply are fair. We quote: White comb, 1lb., 15@16c; dark, 10@12c. Extracted—White, 7c; dark, 5@6c. Beeswax, is in light supply, and demand good, at 23@26c.
CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Dec. 12.—The demand is slow, with good supply, except choice comb. We quote: Choice white comb, 14@16c. Extracted, 5@8c. Beeswax is in good supply and fair demand, at 23@25c for good to choice yellow.
C. F. MUTH & SON,
Cor. Freeman & Central Aves.

NEW YORK, Dec. 11.—Demand for honey is fair, with adequate supply. We quote: Fancy 1-℔.. 14c; do 2-℔.. 12c; fair, 10@12c; buckwheat, 9@10c. Extracted—Clover and basswood, 7@7¼c; buckwheat, 5¾@6c. Beeswax, in fair demand, with adequate supply, 26@27c.
CHAS. ISRAEL & BROS., 110 Hudson St.

CHICAGO, Dec. 12.—The demand is good for fancy white comb-honey, in 1-℔. sections, at 16c; other grades white, 14@15c. Extracted honey selling slowly, owing to warm weather We quote it at 6½@7½c. Beeswax, in light supply and good demand, at 26@27c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Mo., Dec. 12.—Demand poor, with large supply of comb. We quote: Comb—1-lb.. fancy, 15@16c; dark, 12@13c. Extracted—White, 7@7½c; dark, 5@6c. Beeswax—None in market; light demand.
HAMBLIN & BEARSS, 514 Walnut St.

DETROIT, Dec. 11.—The demand for comb-honey is fair and supply moderate. We quote: Comb, 12@13c; extracted, 7@8c. Beeswax in good supply, and light demand, at 25@26c.
M. H. HUNT, Bell Branch, Mich.

CHICAGO, Dec. 12.—Demand good and sup-sufficient. We quote: Comb, 14@16c. Extracted, 6@7c. Beeswax, in light supply, and good demand, at 25@27c.
J. A. LAMON, 44-46 S. Water St.

MILWAUKEE, Dec. 12.—Demand fair and supply good, except of the best quality. We quote: Comb—choice, 1-lb., 15@16c; fair, 13@14c; dark, 10@12c. Extracted—white, in barrels or kegs, 7½@8c; dark, 6@6½c. Beeswax, 23@28c.
A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO, Dec. 9.—Demand good, supply small. We quote: Comb, 1-lb., 10@13c. Extracted, 5½@6½c. Beeswax, in light supply and good demand, at 23@24c.
SCHACHT, LEMCKE & STEINER,
16 Drumm Street.

NEW YORK, Dec. 11.—Demand moderate, and supply reduced, with no more glassed 1-℔ nor paper cartons, 1-℔. We quote: Comb, 1-℔, 14@15c. Extracted—Basswood, 7¼@7½c; buckwheat, 5½@6¼; Mangrove, 68@75c per gal. Good demand for dark extracted honey. Beeswax, in fair supply, with small demand, at 26@27c.
F. G. STROHMEYER & CO., 122 Water St.

CHICAGO, Dec. 12.—Demand is now good, supply is not heavy. We quote: Comb, best grades, 15@16c. Extracted, 6@8c. Beeswax, 26@27c. R. A. BURNETT, 161 S. Water St.

BOSTON, Dec. 11.—Demand is good, supply ample. We quote: 1-℔. fancy white comb, 15@16c; extracted, 7@9c. Beeswax, none in market.
BLAKE & RIPLEY, 57 Chatham St.

ALBANY, N. Y., Dec. 11.—Demand is good, supply not liberal, as stock is mostly in. We quote: White comb, 12@15c; buckwheat and mixed. 9@11c. Extracted—Light, 6½@7½c; dark, 6@6½c. Beeswax—Supply light, and demand steady, at 28@29c.
H. R. WRIGHT, 326-328 Broadway.

NEW YORK, Dec. 11.—Demand is fair, and supply ample, except buckwheat comb. We quote: Fancy white comb, 14@15c; buckwheat, 10@11c. Extracted—Clover and basswood in good demand at 6@8c; buckwheat in demand at 5½@6½c. Beeswax in fair demand at 26@28c.
F. I. SAGE & SON, 183 Reade St.

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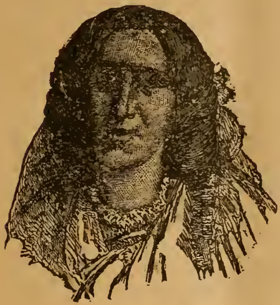

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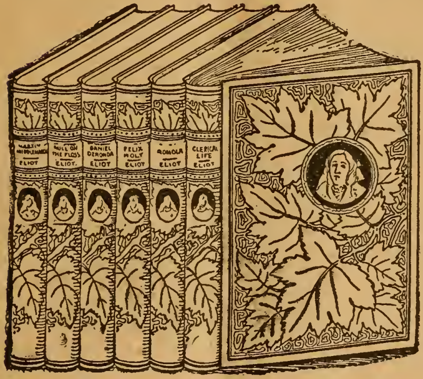

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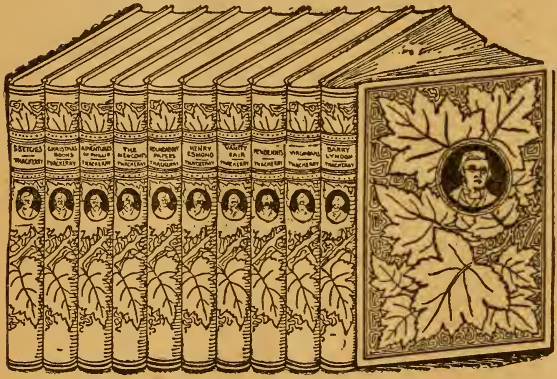
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THOMAS G. NEWMAN,
EDITOR.

Vol. XXVIII. Dec. 24, 1891. No. 26.

Editorial Buzzings.

Ring, O Ring! ye Christmas bells,
Send the glad news pealing !
On the breeze your music swells ;
Unto all of peace it tells,
Peace and kindly feeling.

"Peace on earth, to men good will,"
Ring in tones of gladness,
Naught but joy each heart should fill,
Ring till earth with joy shall thrill,
Ring, and banish sadness.
—Selected.

* * *

1680 Pages were given in the Bee Journal for 1891. In the first six months there were 848, and in the latter half year there were 832, making 1680 in all. Can you desire any better "interest" on the investment of one dollar?

* * *

Please to remember that the Michigan State Convention meets on Dec. 31. A good programme is made out, and an interesting time is expected. It meets at Grand Rapids, as announced in another column.

The Northwestern Bee-Keepers' Society was absorbed by the Illinois State Bee-Keepers' Association, by vote of the Convention held at Sprinfield last week. The annual business meeting is to be held in December, at Springfield, and a meeting for discussion and fraternal intercourse will be held at Chicago in the Spring or Summer. Hon. J. M. Hambaugh was elected President; James A. Stone, of Bradfordton, Secretary, and A. N. Draper, of Upper Alton, Treasurer. The meeting was very interesting, enthusiastic and harmonious.

* * *

La Grippe now holds sway nearly all over the continent. Thousands in every large city are disabled by it. In one large Western city it is reported that 30,000 are down with it. In Chicago, a canvasser, who just called, told us that he thought 25 per cent. of the business men were absent from their desks on account of the malady.

The suggestion is made that the great and indescribably filthy gatherings of pilgrims at Russian shrines and monasteries breed this mysterious disease. There seems to be little doubt that it, like the other epidemics which occasionally strike out from amid the squalor of the East to ravage more cleanly regions, is the offspring of horrible degradation and unspeakable foulness where throngs of human beings herd together like animals.

* * *

Naphthalene, says Dr. Miller in *Gleanings*, is so strongly urged by the *British Bee Journal* as a sure preventive (not a cure) of foul-brood that I wonder we have no report of any one trying it in this country. In an apiary where the disease prevails, put some naphthalene in a sound colony, and see whether it remains healthy. If it proves effectual it will be a great help in eradicating the disease. It has at least the merit of great cheapness and simplicity of application.

Byron Walker has secured from the Western Classification Committee a ruling allowing comb-honey in glassed cases to be shipped in crates.

He exhibited one of these cases to hold crates of comb-honey at the late Northwestern Convention. He remarked as follows on the subject in *Gleanings* :

> I called on J. H. Ripley three times in relation to the matter, and finally, at his request, laid the facts in the case before the committee in writing, having previously sent Mr. R. one of my crates filled ready for shipment. The ruling takes immediate effect. The crate I use is made, with the exception of ends, almost entirely of lath, which work up without waste in crating small single-tier cases. A crate that will hold a hundred pounds costs only about 15 cents, at the outside.

◆

Shipping Bees by freight is a matter of interest to bee-keepers. The rules of the "Classification Committee" are not usually made to conform to the desires of shippers, but are framed for the convenience of the railroads. Mr. Christopher Grimm, of Jefferson, Wis., writes thus :

> Can you not stir up the committee appointed at the Chicago convention a year ago, for the purpose of amending the ruling in regard to the shipping of bees by freight? The ruling now in force on all the Western railroads is, that you cannot ship bees by freight unless you pay for a carload.

The reason for making that ruling was the fact that so many shipments were offered which were not properly prepared for transportation. Exceptions to that rule, however, are often made, when it is shown that the apiarist knows how to properly prepare bees for shipment. Mr. Byron Walker has lately been laboring with Mr. Ripley about Classification Tables and Rates, and we commend this subject to his consideration and care. Some amicable arrangement can probably be made, which will be just to both the apiarists and the railroads. That is all we can expect or desire.

Gleanings is usually opened and read as soon as it comes, but on account of our indisposition, and the consequent "piling up" of matters on the editor's desk, the number for December 1 was not opened until last Saturday, when our eyes fell upon this very kind notice :

> We regret to notice that Brother Newman, of the AMERICAN BEE JOURNAL, is "enjoying" rather poor health. We know it is no joking matter, and hope for his speedy recovery to good health.
>
> It is a tremendous task to get out a weekly bee-journal year after year, and on time. One of the best tonics for a sick man is to let him know that his efforts to please his patrons are appreciated. If that is the case, tell him so when you renew.

Thanks, Brother Ernest, for your good wishes and sympathy. But now things are even worse. Just as we are trying to catch up, the junior member of the firm is prostrated and confined to his residence by a severe attack of *La Grippe.*

The clerks are doing the best they can in the business department, to keep up the daily routine work, in the absence of their chief, but some matters must be deferred until his return to business, which we hope will be in a few days.

◆

Trip-Hammer advertising is the kind that creates industries that make us marvel at their magnitude. How long would it take to shape the hot iron if a stroke was given this week and another six months hence? Constant pounding is what does the business.—W. F. COOK.

◆

Winter Problem in bee-keeping; by G. R. Pierce, of Iowa, who has had 25 years' experience in bee-keeping, and for the past 5 years has devoted all his time and energies to the pursuit. Price, 50 cents. For sale at this office.

◆

☞ If you think "talk is cheap" employ a first-class attorney to do a little talking for you, and see if it is.

California is far away, but the hearts of bee-keepers there beat in unison with their brethren located East of the Rocky Mountains. In a late number of the *Rural Californian*, in the apiarian department, Mr. C. N. Wilson makes the following remarks, which illustrate the fraternal feeling existing there, when writing about the late Convention at Albany, N. Y.:

> The meeting promises to be of more than ordinary interest; every local and State organization is invited to send a delegation. California has never been fully represented in that body, and it would be well if a delegation from California could attend the Convention, get acquainted with the Eastern brethren, and bring home and put in practice the progressive ideas of our friends East of the Rocky Mountains. Whatever facilitates the handling of bees and honey adds to the profit of bee-keeping; and when Conventions are conducted with a view of imparting information and interchange of experience in the business, on that line great good is accomplished.

◆

Colorado.—Here are some news items from a late issue of the *Field and Farm* of Denver:

> A land company in this State recently sold 13,000 sections of white comb-honey in Denver.
>
> J. C. Frisbie, who lives near Denver, obtained 6,000 pounds of surplus honey from 100 colonies of bees.
>
> James Tefft has a colony of bees which gave him 100 pounds of surplus honey.
>
> Mr. Rauschlaub, the apiarist at the Windsor farm, put 157 colonies of bees into Winter quarters in good condition.
>
> An Arkansas man named Arnold, has lately settled at Duff, Arapahoe County. He is located on the Faber ranch, and has an apiary of 140 colonies. There are sufficient wild flowers in that locality to keep his bees busy, to say nothing about the alfalfa.
>
> A bee man in Jefferson County writes: "To give the general reader an idea of what may be accomplished with bees in Colorado, I will merely state that a few days ago I was 'robbing' my bees of their surplus honey, and finding one colony a little more prosperous than its neighbors, I got out my scales and weighed the honey taken from it. There were sixteen frames of honey taken, weighing 121½ pounds, and leaving about 25 pounds for the Wintering of the colony still in the hive. That is good work for Colorado, or any other country."
>
> It is estimated that to collect one pound of honey from alfalfa, 62,000 heads of alfalfa must be deprived of nectar, and 3,750,000 visits must be made by the bees.
>
> Nearly all Colorado farmers are paying some attention to bee-culture, and a number of them contemplate establishing extensive apiaries. With its hay fields of alfalfa and clover, Grand Valley should become a great honey-producing section.
>
> There are 2,500 colonies of bees in Weld County, and the number is increasing every year.

◆

California Apiarists are preparing to welcome friends Cook and Root. The *Rural Californian* remarks thus:

> Professor A. J. Cook, of the Michigan State Agricultural College, well known as author of a valuable work on bee-keeping, entitled "Manual of the Apiary," and A. I. Root, of Medina, Ohio, widely known as veteran bee-keeper and publisher of *Gleanings on Bee Culture*, have arranged to come to California together, and may be looked for in Los Angeles about the first week in January. We trust their visit may prove pleasant and profitable to them. We understand that they propose to make an extended trip and visit points of interest on this coast.

◆

Fertilizing the Clover.—The periodical issued by the Agricultural Department, at Washington, called *Insect Life*, in reply to a correspondent, claims that it has been conclusively established that red clover will not mature its seeds without the cross fertilization brought about by the visits of insects, and particularly bumble-bees. Although many other insects assist to a limited extent, the mouth of the bumble-bee is particularly fitted for this role. It supposes that the smaller percentage of seeds in the early clover is owing to the fact that the bees are few early in the season.

RESIGNATION.

There is no flock, however watched and tended,
But one dead lamb is there!
There is no fireside, howsoe'er defended,
But has one vacant chair!

The air is full of farewells to the dying,
And mournings for the dead;
The heart of Rachel, for her children crying,
Will not be comforted!

Let us be patient. These severe afflictions
Not from the ground arise,
But oftentimes celestial benedictions
Assume this dark disguise.

We see but dimly through the mists and vapors;
Amid these earthly damps
What seem to be but sad, funereal tapers
May be heaven's distant lamps.

There is no death! What seems so is transition.
This life of mortal breath
Is but a suburb of the life elysian,
Whose portals we call death.
—Longfellow.

Queries and Replies.

Temperature of a Bee-Cellar.

QUERY 798.—At what temperature should a cellar be kept when the bees are in it?—Reader.

At about 45° Fahr.—M. MAHIN.

From 42° to 46° Fahr.—DADANT & SON.

From 38° to 45° Fahr.—J. M. HAMBAUGH.

At from 42° to 45° Fahr.—G. M. DOOLITTLE.

At from 42° to 45° Fahr.—R. L. TAYLOR.

From about 45° to 50° Fahr.—J. P. H. BROWN.

If it is a dry cellar, 38° to 40°; if damp, 42° to 45° Fahr.—H. D. CUTTING.

I do not know. From 35° to 50° Fahr. is given by the bee-books.—J. E. POND.

As nearly 45° Fahr. as possible. If dry, it should be 40°, and if damp, 50°.—C. H. DIBBERN.

I prefer it to be about 45° Fahr. in a dry cellar. If the cellar is damp, a higher degree is preferable.—A. B. MASON.

Forty to 45 degrees Fahr. is about right. An occasional warmer degree up to 48, or down to 35 for a short time, if dry, will do no harm.—EUGENE SECOR.

The temperature in which their keeper sees they are the most quiet. Where the outside air is very quiet, or windy, may make a difference.—MRS. L. HARRISON.

Find out at what temperature they keep quiet in your cellar. It may be somewhere from 35° to 50°. Forty-five degrees Fahr. is the orthodox point. —C. C. MILLER.

Between 40° and 50° Fahr., according to how humid the atmosphere is in the cellar; and consequently at the point at which the bees are most quiet.—JAMES HEDDON.

I prefer it to be from 40° to 45° Fahr. I have had bees winter excellently where the temperature was 38° Fahr. for weeks. It did not go below that. There was running water in the cellar.—A. J. COOK.

From 41° to 45° Fahr. Certainly never below 41°, if it is possible to prevent it. With warm cushions over the brood-nest, the temperature may be allowed to go down to 38° for a few days at a time, without injury.—G. L. TINKER.

At about 45° Fahr., or such a temperature as will keep the bees in quietude.—THE EDITOR.

The Dardanelles Strait being the marine gate to Constantinople, is today the most anxiously guarded waterway in all the world. This fact, in connection with the present political situation abroad, gives universal interest to the illustrated article upon "The Dardanelles Question and the European Equilibrium," by John Laird Wilson, in the January number of *Frank Leslie's Popular Monthly*.

When Writing a letter be sure to sign it. Too often we get letters with the name of the post-office, but no County or State. One such came recently, and we looked into the Postal Guide and found there were places by that name in 13 States. Be sure to stamp your letter, or it may go to the dead letter office, in Washington, D. C.

Topics of Interest.

Avoiding Swarms, Placing Sections, Etc.

C. W. DAYTON.

The report of the Northwestern Convention, at Chicago, on Nov. 19 and 20, as given in the AMERICAN BEE JOURNAL, is the most interesting convention report I have ever read, there being so much valuable matter in it, and it is so well "boiled down."

The most interesting part to me is the "Prevention of Swarming," on page 720, and the preventives are mentioned as scarcity of drones and abundant space in the brood-chamber.

Now, the question comes up as to what kind of space it should be—space for brood, honey, or bees, which? Mr. Dadant says for honey; I think, for all of the three. If six or seven combs of brood are in a mass together the bees may swarm, when, to divide the brood and put in two or three empty combs in the center will delay preparations for swarming. This change in the arrangement of the combs of the brood-nest is a damper in addition to the increased space. In order to do this, use at least a twelve-frame hive, and once in four or five days put the two outside combs in the centre, and the two center combs on the outside, a little time before they prepare to swarm, and there will be few, if any swarms. With me it is not one in one hundred.

Non-Swarming Strains.

Mr. Root says: "Get non-swarming strains of bees, as there are non-sitting strains of poultry." Perhaps there are as many non-swarming strains of bees advertised as of poultry, yet the bees swarm and the hens sit; and Mr. Poppleton says the "non-swarming" queens are "no go." Every one knows how easy it is to prevent the hen from sitting by disturbing the nest often, but to change her mind on the sitting question after she has been sitting three or four days, is a much more aggravated case.

If we wait until there are eggs in queen-cells before taking measures on the swarming matter, we will be as much disappointed as in disturbing the sitting hen, as they are ordinarily more than likely to swarm anyway. If the cells are far enough advanced to be capped, even inversion will do no good. They will swarm. That is exactly what has been done—wait until the bees are on the point of swarming before paying them any attention, and then resort to cutting out queen-cells, in the boiling sun, and giving room.

When it was found that these plans would not prevent swarms then the system of hiving swarms on empty frames, and arranging excluders so as to make the newly-hived swarms immediately begin work in the sections, was adopted. This was a case of "what cannot be cured must be endured." It is far preferable to run the colonies straight through the season without a move toward swarming. More can be handled in the straightforward way. Indeed, I have seen whole apiaries where the apiarist was in perplexity as to which hives to put the surplus receptacles on to have them where the bees would store honey in them. Swarming may make a sort of oscillating, vibrating, reciprocating state of the apiary, so when one thinks he has the bees nicely settled down to busness, he may discover it to be just the contrary.

A Poor Rule to Follow.

We often see it advised to put on the surplus receptacles when the bees begin to whiten the tops of the brood-combs, and build pieces of comb here and there. True, it is evidence that more room is needed; but it is just as evident also that the room has been needed for some considerable time, and the bees are certain to have made preparations for swarming by that time. If the colony is going to swarm there is slight advantage in putting the surplus receptacles on because they will soon need to be removed and put on another hive where the swarm is. It is discouraging to get a colony nicely at work in one or two racks of sections, and then the bees swarm and leave them empty.

A Better Rule to Follow.

The time to give more space is not when the combs begin to whiten, but four or five days earlier; and three or four days earlier still to insure certainty. When more room is required, if there is a super half full of sections put on, and the space for the other half of the sections left vacant, the new combs will be extended upward three or four inches into the cap of the hive by the time they begin working on the comb-foundation in the sections. And if there is no extra enticement into the sections, the whole of the other part of the cap will be stored full before the sections are occupied. I have experimented all along this line.

The fact is that the sections should be half full of comb by the time the cells at the upper edges of the brood-combs are lengthening. Bees lengthen these cells to store honey in after the old honey cells are already filled. There is plenty of time and a sufficient amount of honey coming from the fields to have from 20 to 50 sections filled with new comb, but it is often wasted in patching here and there with burr and brace-combs, and otherwise arranging to store honey near the brood.

How to Arrange the Sections.

Arrange the sections by the side of the brood-nest in the lower story by putting in one wide frame full at a time. The wide frame is a device by which many of the "late crop" of bee-keepers will probably object to as a thing to remain in the past, but I find there is an "old school" of bee-keepers who kept bees twenty to thirty years ago, who have clung to them all through the later years of new fixture adoption, and to-day hold them as old, reliable friends.

About the only objection the wide frames ever had was the liability of the queen to lay eggs in them, and it is a query why bee-keepers have not used excluders at the sides of the brood, as well as at the top of the brood-nest.

The best drone-trap in the world is a zinc on each side of the combs the queen occupies, and it matters not how much drone comb there is outside the excluders, as it must be filled with honey if filled at all.

Clinton, Wis., Dec. 11, 1891.

Superiority of the Italian Bee.

J. S. BRENDLE.

Having now been a subscriber and careful reader of the BEE JOURNAL for three years, and feeling myself under obligations to the editor, as well as to the able corps of contributors who have given so generously of their store of wisdom to render these columns interesting and instructive to the bee-keeper, I deem it but fitting that I should here record my public acknowledgment of the benefit I have received. My experience as a bee-keeper is by no means extensive, either in point of time or extent of plant, but the little that I *do* know about that important industry I am free to say must be accredited directly or indirectly to this valuable paper. I have become greatly attached to it, and always anticipate its weekly visits with pleasure.

There is one subject of paramount interest to every progressive bee-keeper, which I know has received its due share of attention in the JOURNAL, and toward the elucidation of which I desire to contribute my mite of testimony. It is the much mooted question relative to the merits of the five or six banded Italian bee as compared with other strains or species. For this locality I say, without hesitancy, that I consider the Italian vastly superior to any other strain I have tried or know of.

I have five colonies of Italians that yielded on an average between 35 and 40 pounds of honey during the past season, while an equal number of black natives, which received the same care and attention, produced no surplus honey at all. The trouble with the natives seemed to be that they did not get into working order until the best part of the honey season was past, while the Italians lost no time in getting to work when the first cherry blossoms appeared, and proved themselves the busiest kind of bees during the entire period of fruit blossoming.

The points I would specify as decidedly in favor of the Italians are their greater vitality, industry and cleanliness, in all of which desirable qualities they seem to excel all others. Its greater vitality enables the Italian bee to endure a greater amount of exertion, and to gather more honey in a given time, without overtaxing its strength, than any other kind that I have had. Its industry on a sunny day, when nectar is to be gathered in garden, orchard, field or meadow, is that of the proverbial "busy bee," and compares favorably with that of any other.

Its cleanliness is sufficiently remarkable to justify a special mention thereof. My honey during the past Summer was of the finest quality, clear as crystal, as inviting as the best honey can be, and commanded extraordinary prices. If I could have supplied the demand I would be considerably the richer for it. Of the peerless beauty of the Italian I need not say anything; that is universally acknowledged. Nor need I mention its sweet disposition or amiable temper, for that is a point admittedly in its favor with all who are not partial to quick-tempered bees. Such is the evidence of my experience.

Shaefferstown, Pa.

Punic and Minorcan Bees—Explanation.

T. W. COWAN.

DEAR MR. NEWMAN:—I wrote to you on Nov. 13 in reference to Mr. Pratt's article, headed "Some Facts About Punic Bees," in your issue of Oct. 29. In justice, I should like to correct an error which has inadvertently crept in.

I said: "Mr. Carr had never had or seen a Punic stock in his life." This is perfectly true. I also said that "not one word has been written in the *Record* about Punic bees, either editorially or by any of its contributors." Now, I wish to modify this statement, because I find on page 74 of the *Record* for June, 1890, this query: "What Kind of a Bee is the Punic?" The reply is: "According to a Hallamshire bee-keeper the Punic bee comes from North Africa. It is dark in color, and from our limited experience of it, is a good worker and a prolific sort. We shall soon know more of this bee, as persons are trying it."

This correction is immaterial, because the answer is given in general terms, and not from personal experience, as the context will prove to any unprejudiced person. The reply there given is evidently on the strength of Mr. Hewitt's own description of these bees in the concurrent number of the *British Bee Journal*. From personal experience Mr. Carr knew nothing, from the fact that he had never had or seen a Punic stock, and of so little importance did he consider the subject, that the reference to Punic bees does not even appear in the index, hence the oversight on my part.

It is not likely if Mr. Carr had been in possession of a Punic stock that I should have been in ignorance about it, or that there would not have been some allusions to this stock in the *Record*, which is conducted by Mr. Carr. But the fact is that Mr. Hewitt was the only one who wrote about Punic bees, and although an inquiry was made on Oct. 29, page 512, of the *British Bee Journal*, for results of these bees, there was not a reply from any one supposed to have had them.

The very fact that there was no one to speak in their favor was sufficient justification for Mr. Carr to treat the whole matter as of no importance. I simply make this explanation because I have found the error, and so as not to give others an opportunity of making capital out of an unintentional oversight, although I consider it irrelevant to the main point at issue, which is the statement that Mr. Carr had a Punic stock, and that this was alluded to in the June *Record*.

I should now like to make a remark on Mr. Hewitt's article, headed "Punic and Minorcan Bees," on page 660 of the AMERICAN BEE JOURNAL. There he alludes to an extract from the *Revista Apicola*, appearing on page 535 of the AMERICAN BEE JOURNAL.

This extract was translated by myself, and appeared in the *British Bee Journal*, on page 445, and I have no doubt by an oversight on your part it was credited to the *Revista* instead of the *British Bee Journal*. But what I particularly wish to call attention to is that Mr. Hewitt in that article states, "the editor and writer of that paragraph, F. C. Andreu, has several times written to the *British Bee Journal*, etc." It so happens that F. C. Andreu is not "the editor" nor the "writer" of that article, so that all Mr. Hewitt's arguments in endeavoring to discredit the writer of that article by allusion to another person altogether must fall to the ground.

F. C. Andreu, alluded to, was a novice in bee-keeping when he first wrote to the *British Bee Journal* in 1886. It was quite evident that he had never seen Italian bees up to that time, and that he mistook the light bands of thin chitine between the segments, when the abdomens are distended, for the classic bands. He also explains that he had never seen Carniolans, and, consequently, when he received a Carniolan queen, accompanied by black bees, he naturally did not know that they were not Carniolans, hence he thought that they resembled Minorcan bees.

Several years have elapsed since 1886, so that Mr. Andreu, who was a pupil of the *British Bee Journal* at that time, has had ample time to become thoroughly acquainted with the race of that country, as well as with others.

Mr. Hewitt says: "It is hardly fair to quote as 'good authority' a writer who can make so many mistakes in the matter." This is misleading, because F. C. Andreu was not quoted as "good authority." The editor of the *Revista Apicola* is quite another person, and is D. Francesco F. Andreu, and he, I presume, is the writer of that article. This gentleman has shown by the way he conducts his paper, and the articles he writes, that he can be considered "good authority," and I would recommend you to read an article of his on the subject, on page 298 of the *Revista* for Oct. 15, 1891.

Since 1888 I have had greater experience of Minorcan bees, as well as African bees, and I can state that the Minorcan bees are as black as the blackest African bees from Algeria and Morocco that I have seen, and blacker than the impure varieties from Tunis. I think from this resemblance there can be little doubt but that they all had the same origin, and my belief is strengthened by the Minorcan bees being called *Moriscas* by the natives, thus denoting their African origin. It is further strengthened when we remember that the Carthagenians, who, besides having 300 towns—a dependent territory covering half the space between the Lesser and Greater Syrtis—had foreign dependencies in the Balearic isles, besides those in Sicily, Sardinia and Spain. Of the Minorcan bees M. Andreu says: "The race is hardy, gentle, great workers and breeders, and from the parent hive I had to cut out nearly *two hundred* queen cells." (*British Bee Journal*, 1886, page 282.) As similar language has been used in connection with the Punics, comment is not necessary.

Now, as to the meaning of the word Punic, Mr. Hewitt says: "All classical scholars know that it means 'belonging to or appertaining to the Phœnicians, a people whose capital was Carthage." The last part of this sentence is given as a quotation, but I am afraid most classical scholars will be startled at this news. It has been usually believed by classical scholars—and I confess that I have shared the belief since I left college—that Punic meant "of, or pertaining to the Carthagenians," and that the chief cities of the Phœnicians were Sidon and Tyre, the latter being the more important, and might be designated the capital. The Phœnicians founded a colony at Carthage, just as they did at Cadiz and other places, and it was to the Carthagenians that Carthage belonged, and that the word Punic is always applied, and not to the Phœnicians. We might just as well speak of anything appertaining to the English, a people whose capital is Toronto; for Canada is just as much a colony of the English as Carthage was that of the Phoœnicians, and just as the English colonists in Canada have become Canadians, so the Phœnician colonists in Carthage became Carthagenians. Mr. Hewitt's classical knowledge seems to be very vague, and he is apparently approaching a subject he knows little about, or he would not have alluded to the Phœnicians, whose capital was Carthage.

He further says that he has several times stated where they (the bees) come from, but if this is so he has carefully written in some paper that does not reach the eyes of the majority of bee-keepers. For my part I have never seen anything more than that "they come from North Africa, close on the borders of the great Sahara desert" (*British Bee Journal*, June 5), and this has been repeated in several bee-periodicals, without stating precisely where they come from. I have my own views on the subject, and Mr. H. Alley, in writing about them in his paper, has unconsciously let slip a word or two that has enabled me to localize them, but I must say, as I have said all along, that I do not know such a race as Punic, although I know Tunisian bees very well.

People who know anything about geography know also that on the north side of the equator the Winter comes at the same time. It is milder in some places than in others, but December is as much Winter in Northern Africa as it is in England. My attention has been called to a gardening paper which I very seldom see—the *Journal of Horticulture*—and on page 316 I find Mr. Hewitt says his friend, "a Lanarkshire bee-keeper, gives these bees, in their purity, an indifferent report," and further says, "I think he has not exactly treated them fairly, for in all experiments with these bees it must be remembered that their natural months for rest is our Summer, which is their Winter." This will probably be as fresh news to you, Mr. Editor, as it is to me, and it is evident all our former notions about climate and seasons will have to be altered if Mr. Hewitt is to become the authority on such matters. I for one will hesitate to believe that the Winters will ever be Summers on this side of the equator.

There is one more subject I should like briefly to allude to, although your just rebuke would make any sensitive person smart. On page 526 of the AMERICAN BEE JOURNAL, Mr. Hewitt has an article on "Correct Nomenclature." I hope you will not think that we consider Mr. Hewitt as a correct exponent of the English language, for we do not believe a colony of bees to mean "a lot, without a queen, depending on the mother, or some other stock, for one."

However correct "stock" may be, "colony" is equally correct, and we find this word constantly used by ancient writers. Thorley, who wrote in 1744, used the word continually, and so did many other writers, so that the use of this word is perfectly legitimate. Nor can I agree that only an Englishman can correctly define the English language, but maintain that a philologist can correctly define any language that he has properly studied.

My letter has exceeded the limits I had intended, and I hope you will excuse it, but I was anxious to correct the error I had unconsciously made, and also to refer to Mr. Hewitt's frequent inaccuracies.

London, England, Oct. 2, 1891.

Bees Unconscious of Their Acts.

G. W. DEMAREE.

Query 791 seems to have awakened some inquiry involving the question, "Do bees reason?" Properly, "Are bees intellectual beings?" Were I going to decide the question upon the *evidence*, "Do bees reason?" I would commence at the bottom of the proposition, and reaaon upward to a conclusion. Those answers to the query that tend to the affirmative, begin their reasoning at the top and proceed downward. The same is true as to the line of reasoning adopted by the writer of the articles on pages 587 and 658 of this JOURNAL. Such a method of reasoning is faulty because it assumes the thing to be true, that it is to be proven.

The best philosophy, most universally accepted in all the ages of the past, and which is supported by divine revelation, teaches that the animate creation of the universe consists of two classes of beings, with a sharply-cut line between them. The one class is rational, intellectual, spiritual, immortal. Man stands at the foot of the "created intelligence," being a "little lower than the angels." The other class is *animal* only—irrational. I will not insult the intelligence of the reader by asking to which of these classes the bee belongs. She is an irrational creature, and, therefore, does not "reason." But it is argued that bees do things that seem to be the effect of "reasoning," and perform some acts that look like the exercise of the faculty of memory, etc. Admit this, and yet this sort of reasoning is the merest assumption, because it assumes as true the thing to be proven.

The question does not rest upon the *acts* the bees perform, however wonderful they may be. Do they perform their part in the economy of life *consciously*, as rational beings? When this is proven affirmatively, it will be time enough to assert that "bees reason." Until the proof is forthcoming, those of us who are less credulous, will be content with the belief that bees, like other irrational animals, perform their acts in the economy of life *unconsciously*, under directions of the promptings of instinct, which is the "property of animal life."

I might safely let the subject drop here, but as it is an interesting one to me, I propose to suggest a few ideas that may interest some, and be of benefit to all who care to study the instincts and habits of bees.

The notion that bees "send out scouts" from the clustered swarm, is an ancient story. It dates back to where the "memory of man runneth not." It is as old as that other story that bees look after the coffin that saddened the household, especially if there was the smell of varnish about the coffin. It is a good story, calclutated to excite the wonder of lovers of the "curious," and no set of people is more fond of the curious than the bee-people.

I once thought it was true, and when I was investigating its claims I was very slow and shaky to give up my faith in the "bee scouts," after the fashion of Moses and Joshua, with the historical Rahab left out. If our romantic fathers had held on to the Rahab episode, it would have "shaken" me all over to give it up.

But one thing that I observed made it more easy to me. When experimenting I noticed how unreasonable these "reasoning" bees were. As soon as the cluster was formed, a "counsel was held," and "scouts" were "sent out" in all directions, and as soon as one of them returned and reported that a home was discovered and pre-empted (no title papers), the swarm, without further ado, would "light out" to the preemption, leaving the other faithful scouts to mourn the perfidy of the commonwealth. It seemed to me that this was as mean a trick as any "reasoning" beings could be guilty of. Many times nations of people have declared war because of acts of less treachery than these.

In fact, and free from all romance, I discovered that when a swarm is about to issue, the whole of the colony is not "struck" with the swarming impulse alike and at once. This is a wise provision of nature to guard against the entire desertion of the brood. This is shown by the fact that some individual bees are taken by surprise, and hurry off with the swarm while loaded with pollen. Others seem to go without the promptings of the swarm impulse, and true to habit, not broken by the swarm impulse, these individual bees leave the cluster to pursue their daily work, some to the watering places, and others to the fields.

It is this class of bees, and others that get lost from the swarm, that visit the place where the swarm settled. Such bees always return to the hive where the swarm came from. These observations, with the fact that not one swarm out of a half dozen goes straight to their future home, settles the "scout" romance.

I have seen a great many swarms find their way into hollow trees and empty hives, but have never seen a single case where they entered the place deliberately. On one occasion I had been watching a large colony that looked like swarming for several days, and was near the hive when they came out. They raised high in the air, and I was sure of losing them, but as the swarm passed over a large apple tree that had a dead hollow limb near its top, the lower part of the swarm paused, as though something attracted their attention, and speedily began to enter the hole in the dead limb. The main part of the swarm, higher up in the air, seemed to hear the "call," and, swung around in a circle, and joined the general rush for the "new home."

It was as clear a case of finding a "home" by the echo responsive to the multitude of vibrating wings, as the most incredulous would demand. When I drove these bees out of their "new home," I found the cavity in the limb too small by half to accommodate a colony of bees.

On another occasion I was doing some work in the woods, and a swarm of bees passed over the tops of the trees, and I followed them, and as they passed near the top of a tall poplar the very maneuvering I have described above occurred, and the swarm entered a hole high up in a limb of the tree. I told the owner of the land on which the tree stood, of the find, and he cut the tree sometime afterwards, but got no honey of consequence. The hollow in the limb was entirely too small to accommadate the swarm.

I can only speak of two more cases now, and they occurred at my apiary. A swarm issued on a windy day, and was struggling against a strong wind in their effort to cluster on a small hackberry tree that stands about two rods from the southwest corner of my apiary. They nearly reached it several times, but were as often driven back by strong gusts of wind. I was standing by, deeply interested in the struggle.

There was an empty hive in the corner of the apiary, and as the swarm was driven back by the wind, they swung down in front of the empty hive, when some of the bees made a change in their course and entered the hive, while the greater part of the swarm took the advantage of a lull in the wind storm, and reached the tree. The "call" rang out from the hive, and from the tree, and the result seemed doubtful. But the hive furnished the best "sounding board," and the bees gradually left the tree and joined their comrades in the hive.

I can give but one more case among many. Last Summer, in swarming time, a swarm of bees passing over my apiary on a bee-line, apparantly making their way toward a woodland pasture a mile ahead, paused over the apiary as they caught the sound from below, and swung down and clustered on a hive-cover, and finally entered the hive. In my rather long experience as a bee-keeper, I have never known a swarm to pass near my apiary that was not attracted by the sound from it. I capture from one to three swarms every season in this way.

That other story about bees selecting and "cleaning out" a "home" in advance of "moving to it," has not been as popular as the "scout" story, because the one contradicts the other.

If bees select a home, and "clean it out," and "glue it up," preparatory to taking possession of it, there is no use of sending out "scouts" from the clustered swarm to hunt a home that has already been discovered, and made ready for occupancy.

The fact is, a little knowledge of the habits of bees ought to teach any observing person that bees visit "decoy hives," and other hives that have been occupied by bees, to carry away the bits of wax and propolis they contain, and that they are often seen gathering the liberated albumen and glucose substance produced by chemical changes in the decay of wood in and out of hollow trees.

Let this suffice. Concluding this article, as I do not care to discuss the subject further hereafter, I wish to lay down these propositions :

It is utterly impossible to prove or disprove that bees send out scouts. No man has ever "shadowed" a bee scout with a full knowledge of her identity. from the time she leaves the hive or swarm-cluster, in all her meanders, until she returns to the hive or swarm from whence she was sent out. Such a feat would be a physical impossibility, out of the range of human power, yet nothing less would suffice to prove that bees send out scouts.

A question like this cannot be taken on "faith." It is a question susceptible of proof, or no question at all. Let us have the proof or nothing.

Christiansburg, Ky.

Price of Honey in California.

C. N. WILSON.

Some months since it was reported that the President of the State Farmers' Alliance had advised all the bee-keepers of California to hold their honey for higher prices, and it is presumed that all members of the Alliance complied with the request. At that time considerable honey was disposed of at 6 cents per pound for extracted, and 12½ cents for comb-honey, on the Los Angles market.

As soon as the buyers understood that such instructions were issued, they withdrew all offers, and have not put in an appearance since, nor are they likely to come into the field in competition with one another under the present aspect of business.

Honey, like other commodities, is regulated in price by the supply and demand mainly, but certain conditions of trade may affect the price for a time. If the yield of honey for the season is large, the dealer and speculator presumes that the price will be low; that if he handles large lots at a very small profit and makes quick sales he can do a good paying business, and he accordingly embarks in the trade. On the other hand, if the yield for the season is small, the dealer and speculator turn to some other product that offers a fair return of profits for the investment of time and money. The result is that the honey product is neglected; there is no demand to speak of, and the price goes down and down, until there is not enough in the business of bee-keeping to justify the investment.

There is no calling or business that is subject to as many vicissitudes as that of bee-keeping. First, the climatic conditions must be just right to insure success; then the surroundings of the apiary as to bee-pasturage must be good; then the care and handling of the bees must be timely and done with a knowledge of the wants and instincts of the bee.

A mistake made in the early part of the season cannot be remedied during the whole year. Sickness may attack the apiary and even knowledge is not always sufficient on such occasions.

But supposing all conditions have conspired to bring a bountiful crop of honey, then comes the task of marketing it at a profit, and just there most bee-keepers make a great mistake. They are at the mercy of the commission men before they know it, and their necessities compel them to let their product go at such figures as others may offer.

They come in competition with a set of sharpers who adulterate honey with glucose that costs but little to manufacture, and is not subject to climatic conditions or very great difficulties in its production. While it is true that nearly every State in the Union has some law in reference to the adulterations of food that would protect the honey producer if enforced, it is very seldom that law is invoked for protection against it, which decreases the demand for strictly pure honey, and tends to reduce the quantity consumed, and so regulates, to some extent, the demand for honey.

It has been suggested that the Government ought to pay the same premium per pound for honey produced in the United States that it does for sugar. But it does not appear probable that the bee-keepers will accomplish much in that direction while they are too weak to enforce the law as to the adulteration of honey with glucose.

The remedy for low prices is to put honey upon the market at a fair price, so that it becomes an article of daily use, just like sugar; guarantee its purity; bring the producer and consumer as close together as possible, and never overload the local markets with the article. Seek distant markets where little or no honey is produced, and prices will be better.

Hardly any business has perpetual prosperity, but to the patient, painstaking, industrious bee-keeper, who keeps right on, year after year, the prosperous and profitable years cover over the years of adversity, and give a generous margin of profit over all losses. Even if honey should remain at the present low prices, the improved methods of handling bees, and the recently invented appliances to facilitate the production of honey, make it possible to produce the article at lower rates than heretofore, and lower prices will tend to popularize the product so that the workingman may readily take home a pound of honey to the children, and perhaps the habit of eating honey will become as fixed in the children.—*Rural Californian.*

National Bee-Keepers' Union.

DR. C. C. MILLER.

FRIEND NEWMAN:—In your Annual Report, as Manager of the Bee-Keepers' Union, you urge the election of new men as officers. I am in entire accord with you in this matter, but you may count with considerable certainty that the same men will be re-elected year after year, so long as the matter stands as it now does, and so long as the men in office give at least moderate satisfaction.

I will tell you why: When a member sits down to fill out his ballot, it is a good deal easier for him to look at the list of names already in office, and say, "I think matters have gone well enough under the past management, and I think I will vote for the same old list."

Or suppose he is not entirely satisfied with one or more names on the list, or even if satisfied he thinks that he would like some new man, and sends in that new name, and suppose each member does the same thing, there is no agreement among them, and each one sends in a different name, so these votes (enough to have elected their man, if there had been any agreement,) are merely recorded as scattering, and are just so many lost votes. You see, practically the old officers have the advantage of being already nominated, and that advantage will hold them in their places.

I think there are good reasons why it may be best for the same manager to continue in office. He has the run of the thing as a new man could not easily have, and his connection with the AMERICAN BEE JOURNAL gives him special advantages to fill the office.

As to the other offices, I do not see why they could not be filled just as satisfactorily by new men. I think I could fill the office of Vice-President during the coming year just as well without the eight years' experience I have had. There are men among the members not now in office, who would, I think, make better officers than some of the present incumbents.

But the difficulty, as I have already suggested, is that there is no opportunity for nominations. Why would it not be a good plan for such nominations to be sent in and published in the AMERICAN BEE JOURNAL? Let me try my hand: Mr. President—I nominate C. P. Dadant, C. H. Dibbern, A. N. Draper, J. A. Green, J. M. Hambaugh, Mrs. L. Harrison, C. A. Hatch, Geo. E. Hilton, E. R. Root, Eugene Secor, B. Taylor, Byron Walker—hold on! hold on! I have nominated more than six already, and there are some good names I have not mentioned. Now, let others nominate.

Now, I will do what I can to get at least one new officer in, so you will please announce that my name is not to be considered, and that if elected *I will not serve.*

It is very gratifying to see how much good has been accomplished by the Union, and to see that the number of members is so much larger than ever before. Success to the organization. Long may it live.

C. C. MILLER, *ex-Vice-President.*
Marengo, Ill., Dec. 15, 1891.

The Iowa Queen-Bee Case.

W. C. FRAZIER.

On page 743 is an item from an Elgin paper, concerning some queens which I had the honor to import, and were it not for the allusion to an attempt to "evade custom duties," I would pass it by in silence. Simply because I happened to be the one that had to pay the fiddler I do not want it thought that I did not enjoy "the dance" as much as any one.

I will here give as briefly as possible what I happen to know concerning it: About Sept. 9, 1890, I sent an order to Italy for queens, accompanied by the cash, and ordered them to be sent by mail about May 5, 1891. As it happened that the Spring of 1891 was late in Italy, as well as in this country, the queens were not all mailed at once. Meanwhile the tariff law underwent a change, and when I found that there was a duty on imported queen bees it was too late to countermand my order before they would be shipped.

I therefore wrote to the Treasury Department explaining the case, and it was decided that they would admit them under the circumstances by paying a fine equal to the duty thereon.

I received, by mail, from Italy, seven queens; six of them were dead, with all their attendants. One queen was alive, as was also one attendant. This queen represented an outlay of $18.45. I will further state that I used her to fill an order for an imported queen, at regular

July prices, as per my price list. It is scarcely necessary to add that I do not now order my queens sent by mail.

Any one who wishes to may try it. The Italians are willing to send any number you may desire by mail, at the purchaser's risk, and now no duty is demanded.

The decision that queen-bees could be admitted free of duty was made on June 12, 1891. Many have claimed the honor of securing that decision, but the honor, if there is any honor to it, belongs to only one. Of course I understand that all have a copy of the decision who applied to have the duty removed. It is a little matter, and one concerning which I care nothing ; but when a man claims that he secured the removal of the duty on queens, I want him show his paper bearing the earliest "number." The number on my copy is 7,641 F. Who has an earlier one?

The main thing that I care for is to show that I was not trying to "beat" the "custom duties."

I shall soon order another importation of queens for next Spring, but they will come by express. For who can tell what Congress may do between now and next Spring? By that time I may be again guilty of the henious offence of importing queens contrary to law.

Atlantic, Iowa, Dec. 12, 1891.

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Utah Bee-Keepers' Convention.

JOHN C. SWANER.

The Convention held in Salt Lake City, Dec. 3 and 4, was one of the most enthusiastic meetings of the kind ever held in Utah. Representatives from all over the Territory were in attendance.

It was called to order at 2 p. m. on the 3d, Mr. John Carter, of Mount Pleasant, presiding.

Professor A. J. Cook, of the Michigan Agricultural College, spoke on exhibits, conventions, and methods of putting up honey in saleable form, complimenting Utah bee-keepers on the fine quality of their honey, also explaining the part bees perform in the fertilizing of fruit bloom in a pleasing and interesting manner.

A discussion was then had upon the subject of foul-brood and other subjects pertaining to the pursuit.

A. I. Root, of Medina, O., gave a few interesting facts upon marketing, etc. The meeting then adjourned until 7 p.m.

The evening session opened with J. S. Scott, of Springville, in the chair.

Professor Cook was called upon to give a lecture on foul-brood, which was able and interesting. A sociable chat and discussion ensued, on topics pertaining to the pursuit. The meeting adjourned until 10 a.m.

The morning session opened with O. B. Huntington, of Springville, in the chair.

Mr. Swaner then stated the object of the meeting, that it was for the purpose of organizing a Territorial Bee-Keepers' Association, and read a copy of the constitution and by-laws, which were similar to those adopted by the different associations throughout the country.

A motion was then carried to organize, and the constitution and by-laws were accepted as read.

O. B. Huntington, of Springville, was elected President; Henry Taufer, of Salt Lake, Vice-President; John C. Swaner, of Salt Lake, Secretary, and Joseph Woodmansee, Jr., of Salt Lake, Treasurer. The meeting then adjourned until 2 p.m.

The closing session opened with President Huntington in the chair. Professor A. J. Cook and A. I. Root were unanimously elected honorary members. Remarks on organization and the Bee-Keepers' Union were made by Mr. Root.

The subject of legislation in behalf of bee-keepers in regard to fool-brood was then discussed, and Messrs. Tauffer, Woodmansee and Swaner were appointed a committee to confer with members of the Legislature in behalf of legislation.

A spirited and interesting discussion then ensued on the subject of marketing and packages for honey. The meeting seemed to favor small packages.

Adjourned to meet in the Spring, subject to the call of the President.

Salt Lake City, Utah.

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Grading of Comb-Honey.

BYRON WALKER.

On page 756, under the heading "A Wonderful Proposition," I am taken to task by M. M. Baldridge, because I offer in the previous issue of the BEE JOURNAL to pay 25 cents per pound for white clover honey, "graded according to the rules adopted by the Northwestern Convention."

After quoting my proposition correctly, Mr. Baldridge calls especial attention to the fact, as he calls it (but I fail to see where the fact comes in), that I do *not* say that I will pay 25 cents per pound for such honey. Well, possibly I do not say so, but if not, will some one kindly tell me what words I should have used to make my meaning plainer?

Again Mr. Baldridge says that I do not say how much I can use at the price mentioned. My intention was all right, but in hastily copying the announcement, the words "in thousand pound lots" were left out.

But Mr. Baldridge would have the reader believe that I knew all the while that white clover honey of any grade could not be had at any price, etc. Perhaps so, but from the report of the "Honey Producers' Exchange" (see *Gleanings*, page 629), in which quite a number of the leading honey-producing States of the East are credited with from 50 to 75 per cent of an average white honey crop, at a time when basswood in most of these States was only fairly coming into bloom, and from the market reports, I had the impression that white clover honey was not as scarce as it might be in that locality.

Furthermore, having just received one thousand pounds of choice white clover honey from Eastern Michigan, for which I paid 25 cents—I mean 12½ cents per pound (that is all they ask for choice honey there, as the flow from that source was a fine one last season)—it is just possible that Mr. Baldridge is mistaken in his assertion. At any rate, Mr. Baldridge evidently believes that I am dissatisfied with the "rules for grading" in question, and concludes that an explanation on my part will be in order.

I am free to confess that I do not regard these "rules" as above criticism; still, considering the fact that they were gotten up and advocated in the convention by parties who do not make a business of producing comb-honey, but whose chief concern would seem to be the profit that comes from the sale of these goods, they are not such a bad set of "rules" after all, and if the North American Bee-Keepers' Association tones down the requirements of the first grade a few notches, then there will be some encouragement for comb-honey specialists, who are favored with good locations, to attempt the production of some of that grade, during a good honey-flow; otherwise they will do well to await the invention of appliances, or the breeding of a new race of bees adapted to overcome certain insuperable obstacles to their success, such as slightly soiled sections and comb surfaces.

It may be that some one will get up a machine for planing off the one or polishing up the other without damaging the goods.

It might not have done any harm, however, if some rule had been adopted that would at least hint at the grading of that large part of the crop that is marked by one or both of the defects mentioned, or that still larger part, which may be spoken of as considerably soiled in sections or comb surfaces, or both, and yet not *very much* so in either respect.

Perhaps it is unfortunate that the fourth grade, as suggested by Mr. Baldridge was not adopted, as that would at least have made a place for them, while as the rule now stands, the first group referred to have not even been given a place beside crooked combs, which, not infrequently, cannot even be lifted from a case without gouging the combs.

Now let us see how this system of grading works. Suppose I have a quantity of choice white honey to grade. Here are a lot of sections taken from a T-super. The combs are as white as could be asked for, but although the sections have been carefully scraped with a sharp knife, I find that it is impossible to rid them of slight stains without cracking the corners of sections in some cases, and cracking combs in others. Must these sections be relegated to a place in the third grade, with sections of dark honey less than three-fourths full, and not sealed at that?

Here is another group, perfect in every respect, except that a few cells near the edges of the sections are not filled, or if filled are not sealed. Must these sections also be excluded from the first grade?

A third group, in every respect like the last, except that, in order to secure the capping of these few cells, they had been left in the hive a little longer than the other, resulting, as is almost invariably the case, in a slight soiling of a small part of the cappings on one side of the combs. Must these also find a place in the third grade?

A fourth group is faultless in every particular, except that the combs are a little thicker than the average, and, therefore, weigh an ounce or two more; and a fifth group have combs a little thinner than the average. Must both of these be placed in the second grade?

The combs of a sixth group are not quite as straight as they might have been, but the sections can be lifted from the case without marring the combs. Must these be put in the second grade?

A seventh group cannot be found fault with, except that the combs are not firmly fastened to the bottom of the sections. Must these be banished from the first grade?

An eighth group is in all particulars as faultless as the best, only a few drops of light amber honey being noticeable, on close inspection, near the wood on one side of the sections. Must these sections take rank with dark, unsealed, half-filled combs?

Must any or all of the above be put in the second or third grades; and if so, why? Certainly not because they cannot be readily sold if placed in the first grade. Not one fancy grocer in a hundred will object to any one of them. This is not a mere assertion. Actual quantity sales that I have made to hundreds of leading grocers in many Western cities, year after year, ought to be sufficient proof of this assertion.

Personally I have no cause of complaint because of the rules in question, as I have no trouble in disposing of many times the 5,000 or 10,000 pounds that my bees produce each season, at quite satisfactory prices.

As I buy largely, if such rules were in force I would, in common with other buyers, profit greatly at the expense of producers.

Have the purses of comb-honey producers become so full as a result of the last four remarkable seasons, and those of middle-men so depleted, that the former can afford to adopt a grading that will, in many instances, virtually confer a bounty of not less than 10 per cent of their earnings on the latter?

Will it not be high time to adopt such rules when there is good reason to believe that the best interests of producers, as indicated by the demands of the trade, require them?

If we are to adopt a set of rules, I would suggest that not less than four grades are required, which might be designated as fancy, choice, fair and common. Color could be distinguished by the terms white, light amber, amber and dark.

Without going into details, I would suggest that sections having only one of the defects above mentioned, should be placed in the fancy goods; those combining all of them are good enough for the second grade, to which also should be admitted sections where entire comb surfaces are but slightly soiled; also such combs as are only three-fourths sealed on one side, or the equivalent of one-fourth of the comb-surface of one side unsealed on the two sides; also sections having the same amount of comb surface considerably discolored, as well as those having the wood soiled, but still not very much discolored, and those also having two or three cells of bee-bread, but which would have otherwise found a place in the first grade.

Sections having the entire surface considerably soiled, or the equivalent of the surface of one side very much soiled, or an equal amount of unsealed surface, should be placed in a third grade; and those whose entire comb surface is very much soiled, and not sufficiently filled or sealed, or too defective in other respects for the third grade, but which contain not less than half a pound of honey, should constitute a fourth grade. As to whether color shall be made a basis for grading, is a matter of little importance compared with the placing of first grade honey where it will sell for third grade prices. As it is proposed to adopt rules for the Eastern States (where a great deal of fancy buckwheat honey is produced), as well as the West, where such honey cuts but a slight figure, it will perhaps be best to grade without regard to color. But I fail to perceive how certain prominent apiarists, who were so fearful that a grading would be adopted which would debar this Fall-gathered amber honey from the first grade can be satisfied with the rule regarding soiled combs, for this rule will inevitably put nearly, if not quite all of it, in the third grade.

Convention Notices.

☞ The annual meeting of the Colorado State Bee-Keepers' Association will be held in Denver, Jan. 18 and 19, 1892.
H. KNIGHT, Sec., Littleton, Colo.

☞ The Michigan State Bee-Keepers' Association will meet in Grand Rapids, Mich., on Thursday, Dec. 31, 1891, and Friday, Jan. 1, 1892, GEO. E. HILTON, Sec., Fremont, Mich.

☞ The Indiana State Bee-Keepers' Association will convene in the agricultural room of the State House, at Indianapolis, Jan. 8, 1892, at 1 p.m. All bee-keepers are invited to attend.
GEO. C. THOMPSON, Sec., Southport, Ind.

☞ The annual meeting of the Ontario Bee-Keepers' Association will be held in the City Hall, London, Ont., Jan. 5, 6 and 7, 1892. A good programme is being prepared. The usual reduced rates have been secured with the Grand Trunk and Canadian Pacific railways. Also special hotel rates at the Grigg House at $1.50 per day, and at the City Hotel from 80 cents to $1.00 per day. All persons interested in bee-keeping are cordially invited to attend.
W. COUSE, Sec., Streetsville, Ont.

☞ A special session of the California Bee-Keepers' Association, in honor of the visit of Prof. A. J. Cook and A. I. Root, will be held in Los Angeles, Calif., at the Chamber of Commerce, Jan. 6 and 7, 1892. The California permanent exhibit in an adjoining room, will no doubt be of interest to all.
C. W. ABBOTT, Prest.
G. W. BRODBECK, Sec.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Dec. 31.—Michigan State, at Grand Rapids.
Geo. E. Hilton, Sec., Fremont, Mich.

1892.
Jan. 5, 6, 7.—The Ontario, at London, Ont.
W. Couse, Sec., Streetsville, Ont.

Jan. 6, 7.—California State, at Los Angeles.
C. W. Brodbeck, Sec., Los Angeles, Calif.

Jan. 8.—Indiana State, at Indianapolis.
Geo. C. Thompson, Sec., Southport, Ind.

Jan. 18, 19.—Colorado State, at Denver.
H. Knight, Sec., Littleton, Colo.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.

North American Bee-Keepers' Association

President—P. H. Elwood....Starkville, N. Y
Secretary—C. P. Dadant......Hamilton, Ills.

National Bee-Keepers' Union.

President—James Heddon ..Dowagiac, Mich.
Sec'y and Manager—T. G. Newman, Chicago.

Bee and Honey Gossip.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Bees Uneasy in the Cellar.

We have just passed through a rain storm lasting nearly 36 hours, and ending without snow, the mercury indicating 38° above zero, in the shade, on the north side of the house, as I write, 2 p.m. The bees seem to be getting uneasy in the cellar. J. E. Cady.

Medford, Minn., Dec. 15, 1891.

◆

Good Yield in New Hampshire.

Bees have done exceedingly well in this locality this year. It has been the best season for years. The surplus honey was more than double that of last year. First came fruit bloom, which yielded honey abundantly. The same may be said of raspberries, which immediately followed fruit bloom, and lasted until white clover came. It blossomed profusely, yielded abundantly, and the honey was of superior quality. The flow was continuous, from early fruit bloom until white clover faded. Goldenrod yielded sufficiently to enable the bees to store enough for Winter. Few colonies needed feeding. J. P. Smith.

Sunapee, N. H., Dec. 10, 1891.

Experience of a Beginner.

In the Spring of 1889 I bought a colony of bees, and having never seen the inside of an inhabited hive, I got a neighbor to examine them for me once, then I bought a smoker and examined them until I was satisfied. I studied Professor Cook's Manual of the Apiary that Summer, and subscribed for the American Bee Journal, which is always read with great interest. I never lost but one colony, and that one starved the first Winter. Last Spring I started with seven colonies in good condition. On June 8, I had two prime swarms, which were hived on the old stand. One of these were pure Italians, and had seven queen-cells, which were divided among seven nuclei, and as fast as the rest of my bees swarmed they were hived on the old stands, and the brood given to these nuclei, which soon made them strong. As a result, I got 1,400 pounds of nice extracted-honey, being nearly all basswood. I use a metal queen-excluder on each hive, and use the 10-frame Simplicity, which suits me very well. On June 7, I placed a hive on the scales, and it averaged three pounds a day increase up to July 11. From the time basswood bloomed, which was on the 12th, they averaged 11¼ pounds a day until July 29, the end of our honey season; after that they hardly made a living. I am well pleased with the bees, and love to be among them.

Oakwood, Wis. Louis George.

◆

Bee-Keeping in California.

After looking the ground over carefully, and seeking the advice of experienced bee-keepers, I have decided to let the manufacturing business alone for the present, and again enter the ranks as a honey-producer. For that purpose I leave Sacramento in a few days for Southern California—that bee-keeper's paradise, or if not exactly that, the next thing to it. The past year has been a bad season in this valley. Not much honey was secured, and that was of dark quality. Bees do well in this valley generally, but the fruit business overshadows it, and seems to be more certain and more profitable. The field is limited. Some think that 50 colonies in a place are enough to stock it. The main sources of honey comes from tules, alfalfa, and other flowers on the river bottoms. In Southern California apiaries are numbered by the hundreds, and they do not overstock the field. The mountains are covered with the sages, and hundreds of other flowers. This being the most profitable field, it is quite well occupied by enthusiastic and progressive apiarists. A large convention will meet Messrs. Root and Cook at Los Angeles. We regret Brother Newman cannot meet with the Californians. This delightful climate would banish the grippe. Come out here and see us. The latch-string will always be outside, at the bee-ranch of the RAMBLER.

Bee Scouts.

On page 757, T. F. Kinsell wants to know what evidence there is that bees send out scouts. My experience agrees with Mr. Poindexter's. Last Spring I put a hive in an oak tree, about 80 rods from my house. I watched it closely, and noticed that one or two days before the other bees swarmed, this hive was full of bees going in and out, as if at work. When the bees swarmed I hived them, and noticed that three or four days after that there were no bees in the hive in the tree. I have been a bee-hunter for 29 years, and I have found bees in different places—in trees, in stumps, in vines, and logs that lay flat on the ground. I have been in the woods in swarming time, and have seen bees clearing out trees, and in two instances I saw the swarm come and go into the trees, while I stood looking at the "scouts." Sometimes I went back to these trees and found the bees at work in them.

Eden, Wis. THEO. REHORST.

Do Bees Reason?

We have had two very pleasant warm days—yesterday and to-day—so pleasant and sunny that our little yellow pets came out of their hives, and had quite a lively time playing around, and getting some fresh air. Some of them came in the house to get another taste of some honey that Mrs. F. had put away last Fall. They had found their way to this honey before they went into Winter-quarters, and when they came out to fly on this warm day, they came in to see if that honey was still there. They do not forget where you keep your honey. If you once let them sample it, they mark that place. Last Summer Mrs. Fisher put some honey in a safe in our dining-room, and our little busy-bodies found that honey, and began to carry it back to their hives. We concluded to put a stop to that part of their smartness, so we shut the doors and windows, but the bees did not stop. They found a small crack under the door, and in they went. Crawling along on the floor until they reached the safe where the honey was, they hunted until they found a place large enough for them to enter the safe. crawled in, walked around, found that honey, loaded up, came out, crawled down the safe to the floor, along the wall to the door, and crept out at the hole they came in at, and off they went to their hives. Was this reasoning or was it instinct? I sometimes think our pets do a great deal of thinking. Then again when I see scores of them come in the house, fly against a window, and then buzz around and die, when a little thinking would cause them to stop and go out where they came in, I must say I do not know. JOHN D. A. FISHER.

Woodside, N. C., Dec. 12, 1891.

[It all depends upon the definition of words. When correctly defined, we think that there will be but little chance for disagreement.—ED.]

Time to Eqaulize Stores.

On page 653 Mr. W. C. Frazier writes thus: "Early in September is the time to equalize stores, and feed bees," etc. He certainly does not intend this for advice to bee-keepers of this neighborhood, because in this part of Iowa almost all of the surplus honey is stored by the bees from the latter part of August, or first of September until frost; and this year all the surplus honey was gathered in the month of September. I have consulted Levering & Bro., of Wiota, Iowa, and others in my vicinity, and all claim that the month of September is the best time for surplus honey in this part of Iowa, nine times out of ten. If such be the case, would it not be a waste of time to follow Mr. Frazier's advice; would it not be better to wait until the honey-flow is over? I transferred a colony of bees from a tree on Sept. 4, 1890, and they built up and filled 10 frames full of honey and brood by Oct. 1. The frames not occupied by brood I filled with foundation, and they wintered all right in the bee-cave, with my other colonies. This year bees commenced storing honey about the middle of August, but a rain and cold spell set in and continued until about Sept. 1; from that time until Oct. 1 the bees stored their brood-chambers full of honey, and gathered some surplus. From 20 colonies I got 500 pounds; the balance of my bees I had in nuclei, breeding queens. My bee-cellar, as Mr. Doolittle would call it (but I call it a dug-out), is on the north hill slope 7x15 feet, and 7 feet high, the ridge pole being braced by five 6-inch posts, and covered with poles, and about 3 feet of earth on them. The door is in the north side. I claim it is frost proof, and I can winter 1 or 100 colonies with safety in it. Of course, the more bees the more ventilation. I wintered 29 colonies in this cellar last Winter, without a single loss.

THOS. JOHNSON.

Coon Rapids, Iowa.

Florida Climate.

On page 658 is an article by Mrs. L. Harrison on "Florida Bee-Keeping." I know that her lady friend has never been to *this* region, or she could not speak so about the dampness. That lady's broom-handle would have to be 45 feet long to reach water on my place, and as we sleep on the ground floor, and do not dry our clothes every morning, I am sure we cannot live in "that locality." I have traveled from one end of the Indian River to the other, and never experienced the dampness described by Mrs. Harrison's friend. As an actual fact, the moisture or humidity is about 76 per cent, which is about the same as Los Angles, California. Bees do well here on mangrove and scrub palmetto blossoms, and I would not like to see apiarists kept away by statements that are at variance with the facts. In the Summer the dampness is greater than in Winter or Spring, the average humidity being 78 per cent. This is not excessive, considering that we are on the seashore, and subject in Summer to constant showers.

JOHN ASPINWALL.

Eau Gallie, Fla., Dec. 9, 1891.

Honey in Better Demand.

I have 150 colonies of bees, and my crop of honey this year is about 3,000 pounds—one-third being comb-honey and two-thirds extracted-honey—which brought 8 cents for comb, and 6 cents for extracted. My comb-honey was put up in 1-pound sections. The demand was better this year than ever before, owing, perhaps, to a scarcity this year. We had a cold, rainy spell here in April and May, at the time the cactus and cat's-claw were in bloom, and there was no honey stored until July, as horsemint did not bloom in May. As usual, the honey gathered in July was from mesquite, which blooms only in very dry weather. We had no rain from May 15 to Sept. 15, and none from the latter date until to-day. Two years ago I wrote you that I had foul-brood in my apiary, but found that it was not foul-brood, but was caused by heat and want of ventilation. I use the 10-frame simplicity hive, and the frames were so close to the bottom that there was no chance for ventilation. Raising the hives ⅜ of an inch from the bottom-boards, by nailing cleats on the bottom-boards, will prevent swarming most effectually. I have been using some 8-frame hives this year, and will report next year with what success. I would like to hear from some bee-men in South-western Texas, through the BEE JOURNAL.

G. F. DAVIDSON.

Fairview, Tex., Dec. 12, 1891.

Honey as Food and Medicine.

The extensive use of sugar on fruit is not as bad as the cake mania that rages in so many kitchens. The fruit acids largely neutralize the indiscriminate and injudicious use of sugar. It is no serious thing to eat considerable saccharine food in a pure state, but not in the form of pure refined sugar.

If eaten and taken in the form of honey it at once becomes a valuable medicine and food. Instead of having it given us in this form in a mixture with bulk foods, as in the cane and beet, we have it mingled with fruit juices exuded from flowers highly charged with medicinal properties in the alchemy of nature and the apothecary of the bee-hive.

The advantages of honey as a medicine or food are too extensive to be considered at length here.

Honey taken as a food becomes a powerful medicine to the sugar-fed and half-diseased, and many must begin on small quantities and acquire an appetite for it. Foul air, improper ventilation, coal gases, together with the sudden change and exposure of lungs and throats to zero weather, or worse, in a moment, is the source of no end of throat and bronchial troubles.

A free, regular, and constant use of honey, is probably the best medicine for throat troubles there is, and its regular use would be largely corrective here. It is always best to take our medicine and food together.—*Horticultural Times.*

If You Have any honey to sell, get some Honey Almanacs and scatter in your locality. They will sell it all in a very short time.

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